

To subscribe to programming,
or for assistance with
installing or using the system,
call Customer Service at
1-800-333-DISH(3474)



DishPro

SATELLITE SYSTEM

User's Guide



ATTENTION SYMBOLS, WARNING SYMBOLS, AND GRAY BOXES

You must be aware of safety when you install and use this system. This *User Guide* provides various procedures. If you do some of these procedures carelessly, you could injure or kill yourself or damage equipment or property. Some other procedures require special attention.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



The Class II symbol alerts qualified service personnel to use only identical replacement parts in this apparatus.

Also in this *User Guide*, you will find tips in gray boxes at the sides of most of the pages.

FOR YOUR SAFETY



Do not try to open the case of the receiver. There is risk of electrical shock, which may cause damage to the receiver and/or personal injury or death to you. There are no user-serviceable parts inside the receiver. Opening the receiver case or making unauthorized changes will void the warranty.



Warning: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

Note: This *User Guide* covers the DishPro 301 receiver and software model DP301. This *Guide* may cover other receivers, not listed here.

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The information in this *User Guide* may change without notice. We may issue revisions to tell you about such changes.

Please send comments or questions about this *User Guide* to:
Technical Publications, EchoStar Technologies Corporation, 94 Inverness Terrace East, Englewood, Colorado 80112.

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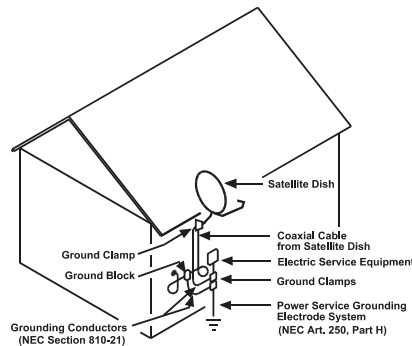
Important Safety Instructions



WARNING You should always follow these instructions to help ensure against injury to yourself and damage to the system.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Note to Satellite TV System Installer: This reminder is provided to call the satellite TV system installer's attention to Article 820-40 of the National Electrical Code (NEC) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.



Safety Tips

- Unplug the receiver from the AC power outlet before cleaning.
- The use of accessories or attachments not recommended by the receiver manufacturer will void the Limited Warranty.
- Do not place the receiver in an enclosure such as a cabinet without proper ventilation.
- Do not stack the receiver on top of or below other electronic devices.
- Operate the receiver using only the type of power source indicated on the marking label. Unplug the receiver power cord by gripping the power plug, not the cord.
- Do not overload wall outlets or extension cords, as this can result in a risk of fire or electrical shock.
- Never insert objects of any kind into the receiver through openings, as the objects may touch dangerous voltage points or short out parts. This could cause fire or electrical shock.
- Make sure that the outdoor parts of the antenna system are grounded in accordance with local, state, federal, and National Electrical Code (NEC) requirements.
- Do not locate the antenna near overhead light or power circuits, or where it can fall into such power lines or circuits. When installing the antenna, take extreme care to avoid touching such power lines or circuits, as contact with them can be fatal.
- Do not attempt to service the receiver yourself, as opening or removing covers may expose you to dangerous voltage, and will void the Limited Warranty. Refer all servicing to authorized service personnel.
- Use an outlet that contains surge suppression or ground fault protection. For added protection during a lightning storm, or when the receiver is left unattended and unused for long periods of time, unplug the power cord from the wall outlet, disconnect the lines between the receiver and the antenna, and disconnect the telephone line. This will provide some protection against damage caused by lightning or power line surges.

Chapter 1

Introduction

WELCOME TO THE DISH NETWORK™ AND DISH INTERACTIVESM

Congratulations on choosing the DISH Network. You are about to experience the excitement and convenience of Digital Broadcast Satellite (DBS) service. DBS delivers the very best in picture and sound quality. And the DISH Network consistently delivers state-of-the-art, satellite-delivered products and services — with high performance, ease of operation and a wide variety of entertainment options.

Your new receiver supports DISH Interactive, an exciting new feature that lets you interact with your TV to obtain weather forecasts. In the future, DISH Interactive may even allow you to buy products associated with the shows you watch, participate in selected programs, and enjoy many other advanced features.

ABOUT SATELLITE TELEVISION

Satellite television uses a satellite in a stationary orbit over the Earth to deliver television and audio programming. This type of orbit enables the satellite to stay aligned over one place on the surface of the Earth.

Once the satellite dish is aimed at the satellite, the dish does not have to move to follow it.

HOW TO USE THIS GUIDE

For more information on any specific feature or function, read *Chapter 3, Using The System*.

For information on assembling and installing a satellite system, read *Chapter 4, Installation Instructions*.

You can look up information on specific topics in the *Table of Contents* or *Index*.

If you have a problem operating the system or receive an error message, use the *Trouble-Shooting Tables* beginning on page 95.

Tip: Channels that appear in red cannot be viewed because they are not part of your subscription. You can add channels to your subscription simply by calling the DISH Network at 1-800-333-DISH.

Tip: Here's how you can quickly find programs to watch and enjoy.

IF YOU NEED MORE ASSISTANCE

If none of this helps, call Customer Service at 1-800-333-DISH (3474) or visit our home page on the Web at www.dishnetwork.com. You can also call the Customer Service number for information on professional installation.

QUICK START GUIDE

STEP 1: ORDERING YOUR PROGRAMMING

1. If the receiver is off, press Power on the remote or press the Power button on the receiver.
2. Press Guide on the remote control.



You will see that some channels appear in white. These channels can be viewed immediately. However, many channels will be in red. You cannot view these channels until you order programming.

TO ORDER PROGRAMMING

- Display the **Important System Information** screen on your receiver by pressing Sys Info on the remote.
- Call the Customer Service Center at 1-800-333-DISH (3474).
- A customer service representative will help you with your system and will discuss the various programming packages available.
- Choose a package and the representative will authorize your programming.
- Wait a few minutes and the channels you purchased will turn from red to white, and can now be viewed.

STEP 2: FINDING PROGRAMS TO WATCH

First, make sure the green light on the front of your receiver is lit. If it is not, the receiver is turned off. There are three ways to find information on programs.

- Press the remote control Guide button. When the **Program Guide** opens, use the Up or Down Arrow to view information on other channels. Once you have highlighted a program in the Program Guide, press Select to watch it.

Note: The **Program Guide** provides a complete listing of all programs available on all channels, including those that are not in your subscription (these channels have red backgrounds).

- While viewing a program, press the Browse (Right Arrow) button.



Then press either the Up or Down Arrow. The information on other channels will appear in the **Browse Banner** at the bottom of the screen. Press Select to watch the program.

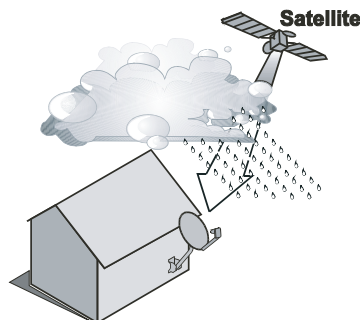
- Press the Menu button and select **Program Guide** from the **Main Menu**. When the **Program Guide** opens, use the Up or Down Arrow to view information on other channels. Once you have highlighted a program in the **Program Guide**, press Select to watch it.

Note: If you select a program that has not yet started, the receiver displays a **Create an Event Timer** menu (for more information on Event Timers, see page 34).

Tip: The system automatically displays programs based on the current day and time. You can advance the Guide to view information on future programs, but not programs that have already ended.

SATELLITE SIGNAL QUALITY

RAIN AND SNOW FADE



Heavy rain, snow, or cloud cover can block the satellite signal, which can interrupt your programming service. By aiming the satellite dish to get the strongest signal, you can help prevent rain and snow from interrupting the signal.

Tip: If you lose your picture, it's most likely due to heavy rain, snow or snow build-up on your dish.

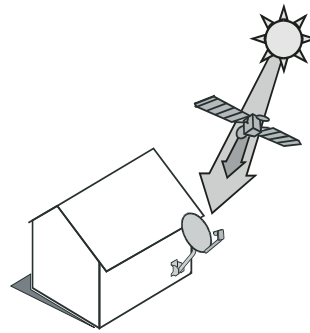
SOLAR INTERFERENCE

Twice a year, the sun moves to a position behind the DISH Network satellite as it orbits the Earth. The exact time of the year that this occurs varies, depending on the location, but it will be around the beginning of spring and again around the beginning of autumn.

Chapter 1

Introduction

When the sun is directly behind the satellite, solar energy overpowers the satellite signal for just a few minutes.



This is an unavoidable natural event for all television involving the use of satellites and has an adverse effect on many program providers. During this period, you will not be able to see programs on the DISH Network. Once the sun has moved from behind the satellite, the programs will reappear.

Chapter 2

The Parts of the System

THE RECEIVER FRONT PANEL

ACCESS DOOR



The Smart Card should already be inserted in the receiver front panel slot, behind the door.

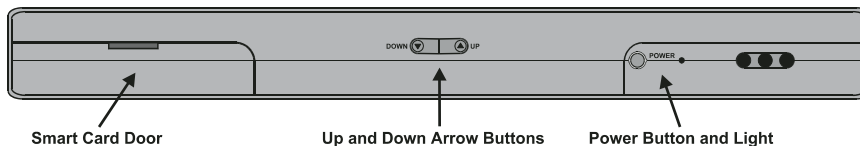
CONTROL BUTTONS

The front panel buttons give you some control over the receiver. These buttons work the same way as the matching remote control buttons, described in the chapter titled *Using the System*.

IR SENSOR AND IR BLASTER

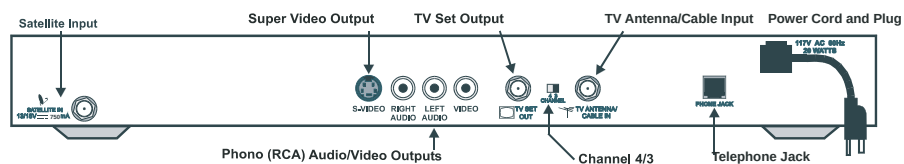
The IR Sensor receives IR signals from the remote control. For information on the IR Blasters, see *page 41, Setting Up the Receiver and VCR to use VCR Event Timers*.

POWER LIGHT



This green light on the front panel lights up when you turn the receiver ON and goes out when you turn the receiver OFF.

THE RECEIVER BACK PANEL



The back panel of the receiver provides the connections that you use to wire the receiver to other electronic devices. It also provides the receiver power cord and telephone jack. Depending on the wiring setup that you use, you may not use some of these connections, but they are available. See *Chapter 4 - Installation Instructions*, or the installation instructions that came with the system for more information.

THE REMOTE CONTROL

Note: This remote control shown here is for example only.



The remote that came with the receiver may be different.

For information on using the remote control, see *Chapter 3 - Using the System*.

For information on using the remote to control other devices, go to the section titled *Control Other Devices with the Remote*, beginning on page 51.

If you lose or damage the remote control, you will not be fully able to control the receiver. If this happens, call the Customer Service Center at 1-800-333-DISH (3474) to order a replacement. You will have to pay for the remote control, plus shipping and handling.

REMOTE CONTROL BATTERIES

The remote control comes with AAA batteries. When you replace old batteries, you should replace all of the batteries. Use batteries of the same kind, for example alkaline or carbon zinc, and don't mix batteries of different kinds. Alkaline batteries last longer.

1. Press down on the battery cover's top latch and lift the cover off.
2. Take out all of the old batteries.
3. Put the new batteries in. Make sure you match the plus (“+”) ends with the plus markings on the battery case.

Fit the battery cover's bottom tab back into the slot at the bottom of the battery case, and snap the cover back into place.



THE MENUS

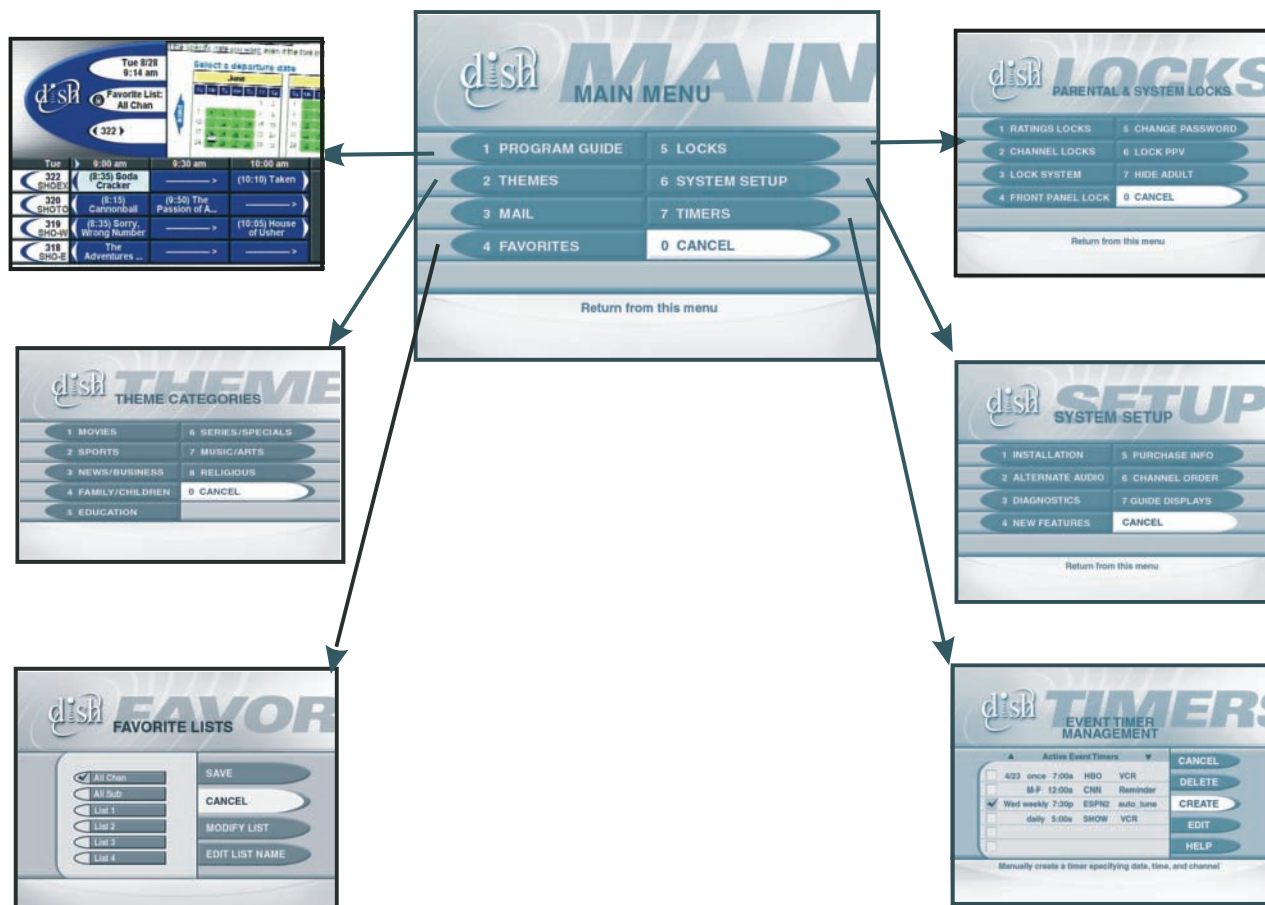
The next few pages describe the menus that the receiver displays on the television screen. The diagram on the following page shows how the menus are related to each other. The section titled *Using the System* explains in more detail how to use the menus to operate the system.

THE MENU STRUCTURE

This diagram shows how the menus that the receiver displays on the television screen relate to one another. The next few pages describe these menus. The rest of this chapter explains in more detail how to use the menus to operate the system.

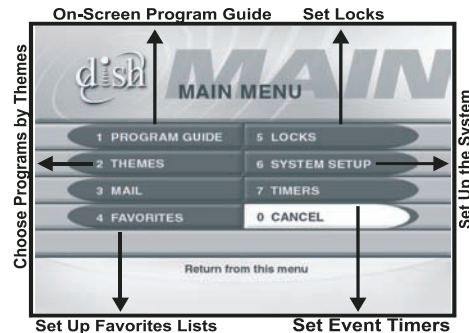
Note: Some of the screens you see may look a bit different than the ones shown here. For example, on some models, the **Favorites List** menu includes a category called **Adult Chan** (if you have this category, you will find information describing it on page 32).

Note: The **Mail** feature is only for delivery of DISH Network messages to you, and only under special circumstances.



MAIN MENU

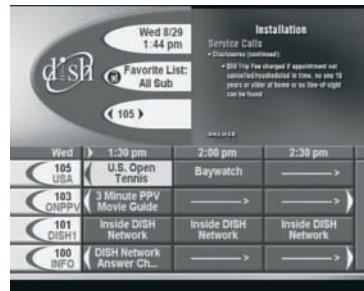
The **Main Menu** is the key to the menus. Each option on this menu displays another menu.



PROGRAM GUIDE

The **Program Guide** lists the available channels and programs. It also has a one-quarter screen video window that shows the last program you were viewing.

Note: Your Program Guide will look like one of the two shown below.



THEME CATEGORIES MENU

The **Theme Categories** menu allows you to choose programs based on their contents.



Tip: Love sports or movies? Choose one of these themes and the system immediately displays a list of all programs on at the current time that fit the selected category. See page 31 for details.

Chapter 2

The Parts of the System

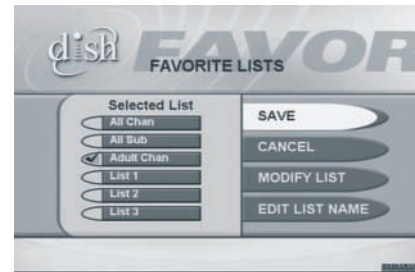
Tip: This menu is where you start to set up lists of your favorite channels. For details on setting up these lists, see page 32.

Tip: Want to keep your kids from watching certain channels or programs? Here's where you can set locks to keep them out. For complete details, see page 42.

FAVORITE LISTS MENU

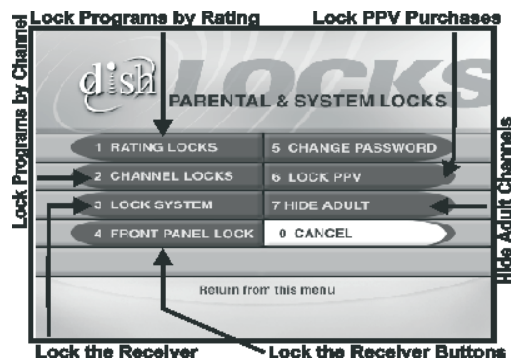
The **Favorite Lists** menu allows you to create, change, and activate lists of favorite channels.

Note: Your **Favorite Lists** menu will look like one of the two shown here.



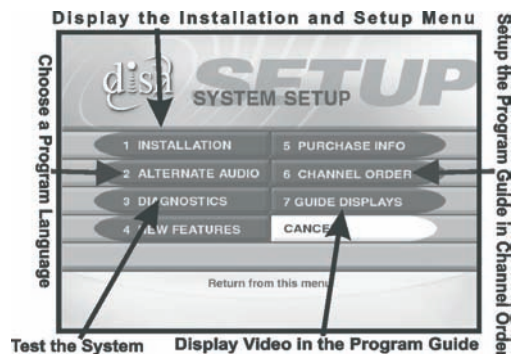
PARENTAL AND SYSTEM LOCKS MENU

The **Parental and System Locks** menu allows you to set and use locks.



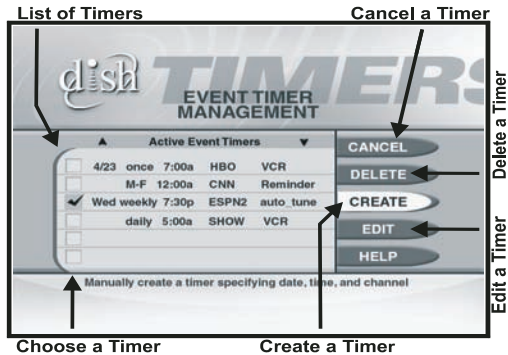
SYSTEM SETUP MENU

The **System Setup** menu provides several features that help you set up and maintain the system.



TIMER MENU

The **Timers Menu** allows you to set up the receiver to tune in and/or record a future “event,” that is, a program.

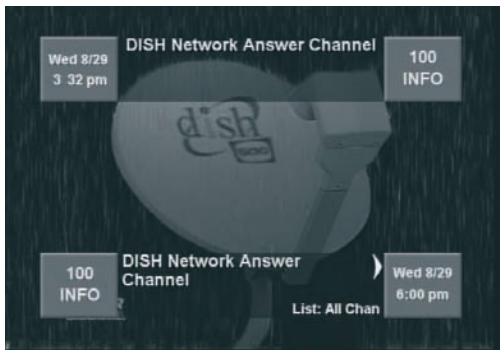


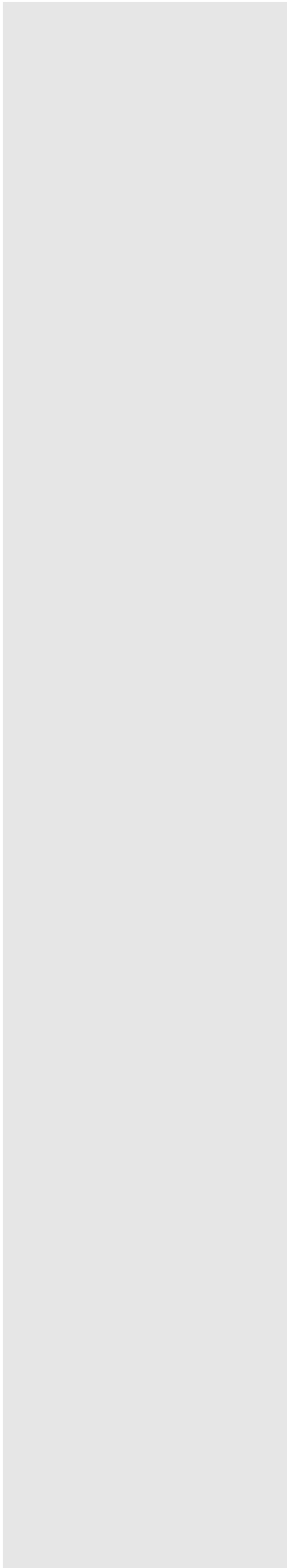
Tip: This menu lets you set timers to remind you when that important program is on. Or you can set timers to video-tape events. See page 40 for complete details.

THE BROWSE BANNER

You can use the **Browse Banner** to change channels, or to see what other programs are available without changing the program that you are watching. The receiver displays information on the program you are watching at the top of the screen and Browse Banner information at the bottom of the screen.

Note: Your Browse Banner may look a bit different than the one shown here.





Notes

Chapter 3

Using the System

BACK PANEL CONNECTIONS

For information on wiring, and wiring diagrams, see the installation instructions in *Chapter 4*. It includes information on installing multi-dish setups and switches.

SATELLITE



Connect the coaxial cable from the satellite dish to the receiver using this input.

TV SET OUT CONNECTION



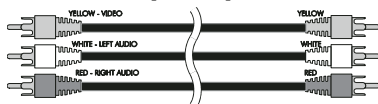
The back panel TV Out connection provides good video and mono (non-stereo) audio quality.

TV ANTENNA/CABLE IN



If you connect a cable TV box or a broadcast TV antenna to the receiver, use the back panel TV Antenna/Cable In connection for the local signal.

PHONO (RCA) AUDIO/VIDEO OUTPUTS



The back panel phono (RCA) audio/video outputs provide good picture quality and stereo sound. If the TV has only one input for this type of audio, connect it to the right (R) phono (RCA) audio output on the receiver.

If you use the phono (RCA) audio/video outputs to connect the receiver with other devices, you may need to use the menus displayed by each device to



Tighten the coaxial cable connections only by hand.

Tip: If you connect a VCR to the receiver, you must also set both the VCR channel switch and viewing channel to this same channel.

Tip: If you use the TV Set Out connection, you must keep the TV tuned to either channel 3 or 4 to watch satellite channels. You must also set the receiver back panel Channel 3/4 Switch to match this channel.

Tip: If you have the receiver connected to a DSL (Digital Subscriber Line) phone line and it cannot dial out, you may have to install a DSL filter between the receiver and the telephone jack on the wall.

change the input from local broadcast TV to satellite TV. See the user manuals that came with the other devices for more information.

SUPER VHS VIDEO (S-VIDEO) OUTPUT



S VIDEO

The receiver provides S-VIDEO, which supports the highest quality video available. If you use this back panel output for video, you *must* still connect the audio using the Phono (RCA) Audio Outputs.

CHANNEL 3/4 SWITCH



4 3
Channel

If you use the TV Set Out to wire the receiver to a television, set this switch to the channel for the signal output. Select a channel that is not being used by a cable or local television channel.

TELEPHONE JACK



PHONE
JACK

Connect a telephone cable with a standard RJ-11 telephone connector to the receiver here, and then connect the cable to an active telephone line.

Note: The receiver must be connected at all times to an active telephone line. If you install two or more receivers, each receiver must be connected at all times to an active telephone line.

USING THE REMOTE CONTROL

The following section describes how to use the remote control with your satellite receiver. You can also use the remote to control your VCR and other devices. For more information on doing this, turn to page 51, *Control Other Devices with the Remote*.

SAT MODE BUTTON



Press this button to set the remote to SAT mode, to control the receiver. The SAT mode button's back light turns ON to show that the remote is set to SAT mode.

Make sure to keep the remote in SAT mode to use the buttons that are described here.

TV/VIDEO BUTTON

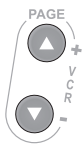
If you connect the receiver using its back panel TV Antenna/Cable In and TV Set Out connections, use this button to switch the receiver between the satellite signal (routed into the receiver's Satellite In input) and another video signal such as cable or broadcast TV antenna input (routed into the receiver's TV Antenna/Cable In input).

POWER BUTTON

Press the left red button to turn the receiver ON or OFF. The green Power light on the receiver front panel lights up to show that the receiver is ON, and goes out to show that the receiver is OFF.

MENU BUTTON

Press this button to open the **Main Menu**.

PAGE UP AND PAGE DOWN (ARROW) BUTTONS

Press the Page Up button or the Page Down button to scan, page by page, through the **Program Guide**, a **Theme Categories** list, a **Favorite List**, an **Event Timers** list, or a list of channels.

MUTE BUTTON

Press this button to turn off the sound. Press it again to restore the sound.

Note: You must program the remote to control your TV for the Mute button to work as described.

VOLUME BUTTON



Press the left-hand, minus (-) side of this button to lower the sound volume. Press the right-hand, plus (+) side of this button to raise the sound volume. **Note:** You must program the remote to control your TV for the Volume button to work as described.

TV or Amplifier Volume Control

If you set up the remote to control a television, the **Mute** and **Volume** buttons - in any mode - control the TV volume. This does *not* apply if you use the **AUX** mode to control a device that has a volume setting.

If you want to control a device that has a volume setting, using any remote mode, do the following:

1. Press and hold the AUX mode button for three seconds, then release it.



2. Press the Pound (#) button.



3. Press the plus (+) side of the Volume button.



4. Press the 0 number button.



5. Press the Pound (#) button. The AUX mode button backlight blinks three times.



To switch back to TV volume control, do the following:

1. Press and hold the TV mode button for three seconds, then release it.



2. Press the Pound (#) button.



3. Press the plus (+) side of the Volume button.



4. Press the 0 number button.



5. Press the Pound (#) button. The AUX mode button backlight blinks three times.

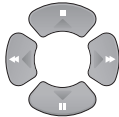


GUIDE BUTTON



Press this button to open the **Program Guide**. When the **Program Guide** is open, press this button to switch among **Favorite Lists**.

UP/DOWN/LEFT/RIGHT (ARROW) BUTTONS



- When using a menu, press these buttons to move the highlight to an option.
- When watching a program, press the Right button to open the **Browse Banner** or the Up or Down button to change channels.
- When the **Browse Banner** is open, press the Up or Down button to see the **Browse Banner** for the next channels.

Note: The Browse Banner, like the Program Guide, shows information on programs in the future. It cannot show information on programs that have ended.

- When a menu offers a list of choices, press the Up or Down button to see more choices.
- When the **Program Guide** is open, press these buttons to move the highlight among the programs.
- When the **Browse Banner** is open, press the Right or Left button to obtain information on the next program that will be on that channel.
- When watching a program, press the Left button to open the **Theme Categories** menu.

SELECT BUTTON



Press this button to select a highlighted option or program in a menu.

RECALL BUTTON



Press this button to return to the last channel you were watching. Press it again to switch between the last two channels that you watched.

Tip: The arrow buttons can be used to quickly navigate through menus and the program guide. When you find a program or menu option you would like to access, just press Select.

Tip: When you're in the **Program Guide**, a **Theme Category** or a **Favorites List** use the **Information** button to get a description of the program, the names of the actors, and other important details.

INFORMATION (INFO) BUTTON



Press this button for more information when the **Program Guide** or the **Browse Banner** is open, or when watching a program.

- When a menu is open that includes a **Help** option, press this button to see help information for that menu.
- Highlight a program in a **Theme Categories** list and then press this button for more information on that program.
- When the receiver is OFF, press this button to open the **Important System Information** menu.

VIEW TV BUTTON



Press this button to return to watching a program.

- If you are watching a program, press this button to briefly display the **Program Banner**.
- While using any menu, press this button to cancel a procedure and return to watching a program.

CANCEL BUTTON



Press this button to cancel a procedure and to return to the previous menu or to watching a program.

SYSTEM INFORMATION BUTTON



Press this button to open the **Important System Information** menu.

RECORD BUTTON



Press this button to start recording a program on a VCR.

NUMBER BUTTONS



When watching a program or with the **Program Guide** open, use these buttons to enter a channel number to change to that channel.

- When the **Program Guide** is open, you can skip ahead and then back a number of hours. Just enter the number you want to skip ahead (or back), and then press the Right or Left arrow button.
- Use these buttons to enter menu option numbers. For an option that has a number, you may do this instead of highlighting the option and then pressing the Select button.
- Use these buttons to enter numbers in a menu. To do this, highlight the place where you want to enter the first number, and press the appropriate number buttons on the remote.
- Then, use the Left or Right arrow button to move the highlight to the next place where you want to enter a number. When you are done entering numbers, press the Select button.

USING THE MENUS

The menus make using the receiver and selecting programs quick and easy. The receiver displays the menus on the TV screen. Use the menus to control the receiver and to use its features, such as setting locks, choosing a program, or creating a Favorite List.

OPENING THE MENUS

You can open the menus in either of two ways:

- Open the **Main Menu**, then open any of the other menus from the **Main Menu**.
- Or:
- To quickly open some of the menus — or get other helpful information — use the matching buttons on the remote control.

Open the **Program Guide**.



When watching a program, open the **Theme Categories** menu .



Tip: You can quickly change channels by using the Number buttons on the remote. Just enter the numbers for the channel you would like to view next.

Tip: To quickly open some of the menus, use the matching buttons on the remote control. For example, press the Left Arrow button to quickly open the Themes Menu.

Tip: To quickly go to any menu option with a number next to it, just press the numbers on the remote that match that number.

Display the **Browse Banner**.



CLOSING THE MENUS

To close a menu and return to watching a program, press the remote control TV View button, or the remote control Cancel button.

Note: If you do not do anything in a menu for several minutes, the menu closes. This will discard any changes you made, and display the program you were watching. This does not mean that anything is wrong with the receiver!

MENU OPTIONS

A menu option looks like this.



HIGHLIGHTING A MENU OPTION

To highlight a menu option, use the remote control Arrow buttons to move the on-screen highlight to the menu option.



When you do this, the option appears lighter than the other options. Please note that this highlight is like the one that you may have seen on a computer screen. A highlighted menu option looks like this..

SELECTING A MENU OPTION

When you select a menu option, that option takes effect right away. You can select a menu option in either of two ways:

- If the option has a number next to it, press the number on the remote control number pad that matches this number. If you do this, you do not need to highlight the option first.
- Move the highlight to the menu option using the remote control Arrow buttons. Then press the remote control Select button.

LISTS OF CHOICES IN THE MENUS

When you make a choice in a list, the receiver does not apply the change until you select the **Save** or **OK** option. If you do not want to save any changes, select the **Cancel** option to discard all the changes made in the menu.

There are two types of lists:

- A **single choice** list allows you to select only one choice at a time. If you select another choice, your previous choice is deselected.
- A **multiple choice** list allows you to select more than one choice at one time. If you select another choice, your previous choice(s) stays selected.

HIGHLIGHTING A CHOICE IN A MENU LIST

Use the remote control Arrow buttons to move the highlight to the desired item in the list. The black arrows on the list show where you can move the highlight.

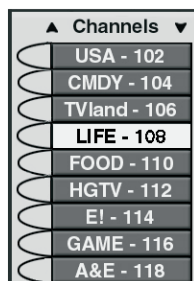
SELECTING A CHOICE IN A MENU LIST

To select a choice in a list, highlight the choice and then press the remote control Select button. Make sure you select the **Save** or **OK** option to save your choice. Select the **Cancel** option to discard your choice.

When you highlight a choice in a single choice list, it looks like this. In this example, the **Spanish** option is highlighted.



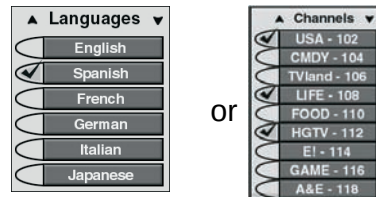
When you highlight a choice in a multiple choice list, it looks like this. In this example, the **LIFE - 108** option is highlighted.



Tip: You can cancel out of any menu option or the program guide at any time, and immediately return to viewing a program by pressing the View TV button.

Tip: The channel you select may display one of several program information symbols. If the program is on a channel that is not part of your subscription, the channel will be in red.

When you select a choice in a list, it looks like this:



CANCELING A PROCEDURE

To cancel a procedure, you must press the remote control Cancel or View TV button before you do the last step of the procedure. If this does not work, you must finish the procedure.

You can cancel a procedure in any of three ways:

- If you want to return to watching a program, press the remote control View TV button.



- If you want to return to the previous menu, press the Cancel button.



- Wait a few minutes and the menu will close, discarding any changes you have made.

CHANGING CHANNELS

Either: Press the remote control Up or Down arrow button to get to the desired channel.

Or: Use the remote control number pad buttons to enter the desired channel number.

USING THE PROGRAM GUIDE

The on-screen **Program Guide** provides a complete listing of the available channels and programs. You can use the **Program Guide** to change channels, to see what programs are scheduled, and to buy pay per view programs. The **Program Guide** shows which Favorite List is active.

Note: Your Program Guide will look like one of the two shown here.



If the **All Sub** list is active, the **Program Guide** displays only the channels in your subscription. If another list is active, the **Program Guide** displays only the channels in that list.

- A red background behind a channel shows that you have not subscribed to that channel. You cannot tune in to this channel.
- The **Program Guide** shows programs that are on now and that are scheduled for some time beyond the present. The guide does *not* show programs that have ended. You can set up the **Program Guide** to list channels in ascending order, with the highest channel number at the top, or in descending order, with the highest channel number at the bottom. To do this, open the **Main Menu**. Then, select the **System Setup** option. Finally, select the **Channel Order** option, select the **Ascending** or **Descending** option, and select the **Save** option.

This receiver allows you to see the program that are watching in a corner of the **Program Guide**. To do this, open the **Main Menu**. Then, select the **System Setup** option. Finally, select the **Guide Displays** option, select the **Partial Guide With Video** or **Full Guide Without Video** option, and select the **Save** option. When you first display the inset, there may be a brief delay before a picture appears. A similar delay may occur at times when you are using the **Program Guide**.

- You can set up the **Program Guide** to hide adult channels. See *Hiding Adult Channels* on page 47.

OPENING THE PROGRAM GUIDE

Either: Press the Guide button.



Or:

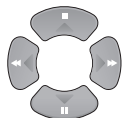
1. Press the Menu button to display the **Main Menu**.
2. Select the **Program Guide** option.

MENU

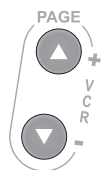
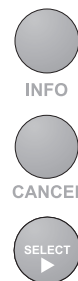


SELECTING A PROGRAM IN THE PROGRAM GUIDE

1. Use the number pad buttons to enter the desired channel number. The **Program Guide** displays a block of channels including the one that you just entered.
2. Use the Up/Down/Left/Right buttons to move the highlight to the desired program.



3. You may press the Information button for more information about the highlighted program.
4. Press the Cancel button to return to the **Program Guide**.
5. Press the Select button to change to the new channel.
6. You may press the Page Up or Page Down arrow button to scan, page by page, through the listing of channels.



7. **Note:** The remote must be in SAT mode to do this.

Note: The use of these buttons in VCR mode is covered in the section titled *Control Other Devices with the Remote* beginning on page 51. You may skip the display forward or backward. To do this, enter the number of hours that you want to skip, using the number pad buttons (the number of hours you choose will be displayed in the white area third from the top of the Program Guide). Then, press the Left or Right arrow button.

Note: The **Program Guide** can display programs scheduled for some time beyond the present, but cannot display programs that have ended.

CLOSING THE PROGRAM GUIDE

To close the **Program Guide**, press the remote control Cancel button. The receiver displays the program you were watching before you opened the **Program Guide**.

DISPLAYING PROGRAM INFORMATION

USING THE PROGRAM BANNER

The **Program Banner** provides information about the program you are watching. The receiver displays the **Program Banner** for a few seconds at the top of the TV screen every time you change the channel or press the remote control View button.

Note: Your Program Banner may look a bit different than the one shown here.



Tip: You can use the **Browse Banner** to see what other programs are available without leaving the program you are watching.

USING THE BROWSE BANNER

You can use the **Browse Banner** to change channels, or to see what other programs are available without changing the program that you are watching. The receiver displays information on the program you are watching at the top and **Browse Banner** information at the bottom of the TV screen. Press the Up or Down arrow to see what programs are playing on the channels above or below the one you are viewing. Information on these programs appears at the bottom of the TV screen.

Note: If the **All Chan** Favorite List is active, the **Browse Banner** displays all the channels. If the **All Sub** list is active, the **Browse Banner** displays only the channels in your subscription. If another list is active, the **Browse Banner** displays only the channels in that list.

If you have set up the **Program Guide** to hide adult channels and the receiver is locked, the **Browse Banner** does not display such channels.

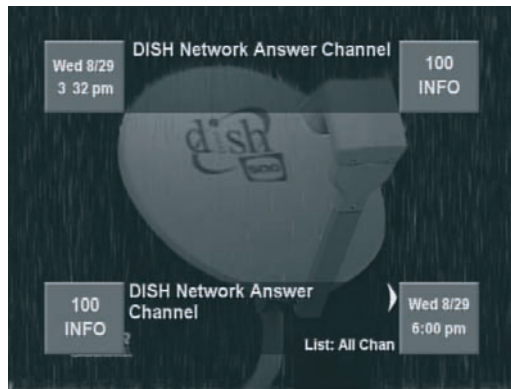
OPENING THE BROWSE BANNER

To open the **Browse Banner**, press the remote control Right arrow button. An example of an open **Browse Banner** is shown below.

DISPLAYING INFORMATION ON OTHER PROGRAMS

1. Press the remote control Right arrow button to open the **Browse Banner** for the program that you are watching

Note: Your **Browse Banner** may look a bit different than the one shown here.



2. Either: Enter the channel number for the program that you want, using the number pad buttons

Or: Press the Up or Down arrow button to display the channel that you want.

3. Press the Right arrow button to display the next program. Press the Left arrow button to return to the current program.

Note: The **Browse Banner** displays programs that are on now. If you press the Right Arrow, it will display information on the program that is on next on the same channel. It does not display information for any other programs in the future and cannot display programs that have ended.

4. You may press the Information button for more information about the program listed.

CHANGING CHANNELS USING THE BROWSE BANNER

If you are using the **Browse Banner** and see a program that you want to watch, press the Select button to change to the new channel. Make sure the program is displayed in the bottom part of the **Browse Banner**.

Note: If the program is on some time in the future, the receiver will open the **Create An Event Timer** menu.

CLOSING THE BROWSE BANNER

To close the **Browse Banner**, press the remote control Cancel button. The receiver stays tuned to the program you are watching.

ORDERING PAY PER VIEW PROGRAMS

1. Highlight the desired pay per view program in the **Program Guide** and press the Select button.

Note: If any lock is in effect that covers the pay per view program, you must enter the password using the number pad buttons. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option.

2. Press the Select button.
3. Either: To buy the pay per view program, select the **Yes** option. The receiver displays a confirmation menu. Go on to step 4.

Or: If you do not want to buy the pay per view program, press the Up or Down arrow button (if you are watching a program), or select the **No** or **Cancel** option. If you do this, you can stop here.

At the confirmation menu:

4. Either: Select the **Yes** option to confirm the purchase. The pay per view fee will be added to your bill.

Or: Select the **No** or **Cancel** option to cancel the purchase.

Note: Once you confirm an order for a pay per view program, you cannot cancel the order and you will be billed for it.

USING THEMES

You can list and choose programs by the theme of their contents, for example, just movies or just sports. You can then quickly list programs based on that theme, and choose the program you want.

1. Either: While watching a program, press the Left arrow button to display the **Theme Categories** menu.

Or: Press the Menu button, and then select the **Themes** option to display the **Theme Categories** menu. Select the option for a category. This displays a list of programs in the category.

Either: Select either the Page Up or Page Down option to page through the list of programs.

Or: Press the Page Up or Page Down arrow button to scan, page by page, through the listing of channels.

Note: The remote must be in SAT mode to do this.

Tip: Want to see what movies or sports events are available for viewing? Just press the left arrow (or Themes button) and use the up/down/left/right arrows to move to the theme that interests you. Press Select and you'll see what's playing.

Tip: Favorite lists let you create lists of your favorite channels. Press the **Program Guide** button until the name of your list appears. This way you can quickly see what programs are playing on just those channels and not every channel in your subscription.

2. Highlight the desired program in the program list.

Press the **Select** button to watch the program.

Note: If the program you highlighted is on some time in the future, the receiver will open the **Create An Event Timer** menu.

Note: If your receiver's Favorite List menu shows the **Adult Chan** list, none of the **Themes** categories such as **Movies**, will show any adult events.

USING FAVORITE LISTS

Favorite Lists are lists of your favorite channels. You can create and change the lists yourself, adding and removing channels as you wish. You can have an unlimited number of favorite channels but they must be grouped into no more than four lists. For example, one Favorite List could have 100 channels and a second list only 10. Or all four lists could have 50 channels each.

- When you make a Favorite List active, the **Program Guide** displays only the channels in that list. Also, the receiver skips channels that are not on the list when you use the remote control **Up** or **Down** arrow button to change channels.
- The **All Chan** Favorite List contains all the channels, except as noted below. You cannot make any changes to the **All Chan** list.

Note: If your **Favorites List** menu shows the **Adult Chan** list, the **All Chan** list will not include any adult channels.

- The **All Sub** Favorite List contains all the channels in your subscription, except as noted below. You cannot make any changes to the **All Sub** list, except by changing your subscription.

Note: If your **Favorites List** shows the **Adult Chan** option, the **All Sub** list will not include any adult channels.

- Some receivers also include an **Adult Chan** Favorite list. It contains all the adult channels available. You cannot make any changes to this list but you can hide all these channels by using the **Hide Adult** option. (see page 47 for details).

Note: If you hide the **Adult Chan** list, no adult channels will be displayed in the **Program Guide**, **View Banner** or **Browse Banner**.

- If you choose a program using **Theme Categories**, the receiver tunes to the channel for that program whether or not that channel is on the active Favorite List. Each Favorite List has a unique color in the **Program Guide**. You can give each list a name.

- When you first get the receiver, the four lists are named **List 1**, **List 2**, **List 3**, and **List 4**. The lists are empty until you add channels to them.

MAKING A FAVORITE LIST ACTIVE

If the **Program Guide** is open, press the Guide button to select the next **Favorite Lists**. Press the Guide button again to scan through all the available lists.

Note: This works only if you have added channels to the **Favorite Lists**. If you have not created any **Favorite Lists**, pressing the Guide button switches the receiver between the **All Chan**, **All Sub** and **Adult Chan** lists (if your receiver displays the **Adult Chan** list).

1. Press the Menu button. 
2. Select the **Favorites** option. 
3. Highlight the desired **Favorite Lists**.
4. Select the **Save** option.

Note: If you try to make an empty **Favorite Lists** active, the receiver displays an **Error** message. You must add at least one channel to this **Favorite List** before you can make it active.

CREATING OR CHANGING A FAVORITE LIST

You can create, add channels to, and remove channels from, a **Favorite Lists**

1. Press the Menu button. 
2. Select the **Favorites** option. 
3. Select the Favorite List that you want to create or change.
4. Select the **Modify List** option.

Note: At any time you can select the **Clear List** option to remove all channels from the current list. This does not apply to the **All Chan**, **All Sub** and **Adult Chan** lists (if your receiver displays an **Adult Chan** list).

5. In the **Channels** list, highlight a channel you want to add to the **Favorite Lists**.

Tip: You can use an Auto-Tune event timer to remind you that a program is about to start and then automatically tune the receiver to the right channel.

Note: You can use the number pad buttons to enter the channel number, or select the Page Up or Page Down option to move quickly through the list.

6. Press the Select button to add the highlighted channel to the **Favorite Lists**. A check mark appears next to the channel.
7. Repeat steps 5 and 6 until you have added all the channels that you want.
8. To delete a channel from the **Favorite Lists**, select the channel in the list. The check mark next to the channel disappears.
9. Select the **Save** option to save all changes to the Favorite List.

CHANGING THE NAME OF A FAVORITE LIST

1. Press the Menu button. 
2. Select the **Favorites** option. 
3. Select the Favorite List that you want to change.
4. Select the **Edit List Name** option.

Note: You cannot change the name of the **All Chan**, **Adult Chan** or **All Sub** list.

5. Select a letter in the keypad area on the menu. Repeat to spell out the desired name. You can enter up to eight characters, including spaces. If needed, select the **space** option to insert a space in the name or the **<back** option to correct a letter.

Note: A list must have at least one character. Two lists cannot have the same name.

Note: At any time, you can select the **Clear** option to clear the name.

6. Select the **Save** option to save all changes.

USING TIMERS

Event timers allow you to set up the receiver to tune in and/or record a future “event,” that is, a program. You can set an automatic event timer for a program listed with start and stop times in the **Program Guide**. A manual event timer allows you to set custom start and stop times for a timer.

EVENT TIMER TYPES

Reminder Reminds you that a program is about to start.

Auto-Tune Reminds you that a program is about to start; tunes the receiver to the program when it begins.

VCR Reminds you that a program is about to start; tunes the receiver to the program when it begins; starts a VCR to record the program.

Note: Many TV programs and films are copyrighted. In some cases, copyright law may apply to private, in-home recording.

EVENT TIMER FREQUENCIES

Once Applies to a one-time program. If the program time changes, this timer operates at the new time. The receiver deletes this timer when the timer operates.

Mon.-Fri. Applies to a program that is scheduled for Monday through Friday on the same channel at the same time each day.

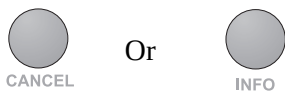
Daily Applies to a program that is scheduled for Monday through Sunday on the same channel at the same time each day.

Weekly Applies to a program that is scheduled for once a week on the same channel at the same time on the same day.

BEFORE AN EVENT TIMER OPERATES

Only during the five minutes right before an event timer operates, the receiver displays a small blinking “clock” symbol on the TV screen. This symbol disappears when the program begins. While the symbol is displayed, you may do either one of the following.

Either: Press the remote control Cancel button to clear the symbol from the TV screen. This does not affect the timer; it will operate.

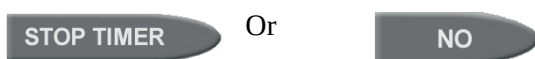


Or: Press the remote control Information button to see more information on the event timer. If you do this, you will have the following choices:

Select the **OK** or **Cancel** option to continue with the event timer.



Select the **Stop Timer** or **No** option to stop the event timer.



Note: This stops only this instance of a Mon.-Fri., Daily or Weekly timer. The timer will operate the next time it is scheduled. To stop all operations of such a timer, you must delete the timer. For a Reminder Event Timer,

ATTENTION!



You can record only the program to which the receiver is tuned. If you open any menu (including the Program Guide) while recording a program on videotape, the menu also will be recorded. If you change the volume or press the Mute button, the volume change may be recorded — depending on how your TV and VCR are set up.

If a program time changes by more than twenty-four hours, the timer will not operate.

Tip: You may start any timer one minute early. But if you set back-to-back event timers and the second one starts early, the first one will end early. An event timer cannot start early for a pay per view program.

Tip: To record a particular program or programs, use the *Program Guide* or your printed television guide to see when the program(s) starts and stops — before you go to the *Set Date/Time for Manual Timer menu*.

instead of having the option to stop the timer, you have the option to tune to the program.

SETTING UP AN AUTOMATIC EVENT TIMER

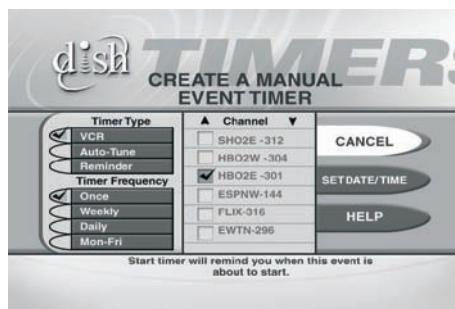


1. Select a future program using the **Browse Banner**, **Themes Menu** or the **Program Guide**.
2. Select a **Timer Type** option.
3. Select a **Timer Frequency** option. If you do this, a check mark appears in the box.
4. Select the **Create** option to save the event timer.

CREATE

5. The receiver displays a timer symbol in the **Program Guide**, and also when you press the Information button to get information about the program.

SETTING UP A MANUAL EVENT TIMER



MENU

1. Press the Menu button.
2. Select the **Timers** option.



3. Select the **Create** option. The receiver displays the **Create a Manual Event Timer** menu.
4. Select a **Timer Type** option.
5. Select a **Timer Frequency** option.
6. Select a channel:

Either: Highlight a channel using the Up or Down arrow button. Then, press the Select button.

Or: Enter a channel number using the number buttons.

7. Select the **Set Date/Time** option. The receiver displays the **Set Date/Time for Manual Timer** menu.



8. Use the number buttons to enter the **Start Time** (this includes selecting **AM** or **PM**) and the **End Time**, (this includes selecting **AM** or **PM**).



9. Use the number buttons to enter the **Date**.
10. Select the **Create Timer** option.

Either: To create another event timer, select the **Create** option again.



Or



Or: If you do not want to create another event timer, press the Cancel button.

Note: You cannot set a manual event timer for a pay per view event.

QUICK RECORD

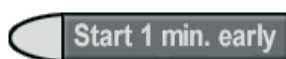
You can quickly create a one-time VCR Event Timer. Do the following.

1. Highlight a future program in the **Browse Banner**, the **Program Guide** or a **Themes** menu.
2. Press the Record button. **Note:** For this to work, you must set up the receiver to control your VCR. For information on doing this, turn to page 41.

- The receiver displays a menu that allows you to create an event timer.



- If you want to start the timer one minute early, select the **Start 1 min. early** option.



- Select the **Yes** option.



OVERLAPPING EVENT TIMERS

If you try to create event timers for overlapping programs, the receiver displays a menu with the dates and times of both programs. The receiver also displays this menu if a program time has changed, causing one timer to overlap another. You must delete or edit one of the timers.

MAXIMUM NUMBER OF EVENT TIMERS

You can create a limited number of event timers. If you try to create more, the receiver displays a menu giving you the option to delete an existing timer. If you do not delete an existing timer, you will not be able to create any new ones.

Note: The receiver deletes "Once" event timers when they operate. You must delete all other types of event timers yourself.

EDITING AN EVENT TIMER

- You can edit almost any feature of an event timer.
- You can edit both automatic and manual event timers.
- Editing an automatic event timer converts the timer to a manual event timer that operates at the times you set, not the actual program times.

- Press the **Menu** button.



2. Select the **Timers** option.



3. The receiver displays the **Event Timer Management** menu.



4. Select the event timer that you want to edit. A check mark appears in the box next to the event timer. Select the **Edit** option.

EDIT

5. You may change the **Timer Type**, **Timer Frequency**, or **Channel**. To do this, select each option that you want.
6. If you want to change the **Start Time**, the **End Time**, or the **Date**, select the **Set Date/Time** option to display the **Set Date/Time for Manual Timer** menu. Otherwise, skip to step 9, below.

SET DATE/TIME

7. Use the number buttons to enter the **Start Time** (this includes selecting **AM** or **PM**) and the **End Time** (this includes selecting **AM** or **PM**).
8. Use the number buttons to enter the **Date**.
9. Select the **Create Timer** option.

CREATE TIMER

Either: To edit another event timer, highlight that timer and select the **Edit** option again.

Or: If you do not want to edit another event timer, press the Cancel button.

DELETING AN EVENT TIMER

Press the Menu button.



Tip: Remember that editing an automatic event timer converts the timer to a manual event timer. This is why the receiver displays the Edit a Manual Event Timer menu.

10. Select the **Timers** option.



The receiver displays the **Event Timer Management** menu.



11. Select an event timer that you want to delete. A check mark appears in the box next to the event timer.
12. Move to **Delete** and press Select on the remote.



Do this again for any other timer(s) that you want to delete.

REVIEWING EVENT TIMERS

You can review event timers by using the **Event Timer Management** menu.

1. Press the Menu button.



2. Select the **Timers** option.



The receiver displays the **Event Timer Management** menu.

Creating VCR Event Timers

- To use VCR Event Timers, you must connect the receiver's back panel audio/video outputs to the audio/video inputs on the VCR.
- To use VCR Event Timers, you must set up the receiver to control the VCR (see page 41 to learn how to do this). If the receiver can't control the VCR, use an Auto-Tune Event Timer to tune the receiver to the channel you want to record. Use the timers built into the VCR to start and stop the VCR at the right times.

LOCKS, BLACKED-OUT PROGRAMS, AND EVENT TIMERS

You must enter the receiver password before you can create an automatic event timer for a locked program, and you must order a pay per view program before you can create such a timer for it. You can create a manual event timer for a locked program without entering the password. However, if you do this, or if the program is blacked out in your area, when the event timer operates the receiver may display only an error or password entry menu. If you have set a VCR Event Timer, the VCR will record only that menu.

POWER OFF AND EVENT TIMERS

If the receiver is OFF at the time an Auto-Tune or VCR Event Timer is scheduled to operate, the receiver will turn ON. Once the event has ended, the receiver will turn OFF, unless you pressed any remote control or receiver front panel buttons during the time that the timer was active.

If the receiver is OFF at the time a Reminder Event Timer is scheduled to operate, the timer will turn the receiver ON and tune it to the channel you last watched. The receiver will then display the reminder menu. You will have a few seconds to respond. If you do not respond to the reminder menu, the receiver will turn OFF.

SETTING UP THE RECEIVER AND VCR TO USE A VCR EVENT TIMER.

The receiver uses an IR signal to control the VCR. This signal is much stronger than the signal the remote uses, so it can bounce off walls or other objects on its way to the VCR. This works in most home setups. However, shelves or smoked glass doors between the receiver and the VCR may block the signal. Also, if the signal must cross a very large room, or bounce off curtains, it may not be strong enough to control the VCR. Make sure that nothing blocks the signal, and that the signal can bounce off relatively nearby, light-colored, smooth surfaces.

1. Press the Menu button.



2. Select the **System Setup** option.



3. Select the **Installation** option.



4. Select the **VCR Setup** option.



5. Either: Enter the 3-digit code number, from the tables, using the number pad buttons.

Tip: For information on programming the remote, please turn to the section titled *Control Other Devices with the Remote* that begins on page 51

ATTENTION!



First you set the locks; then you lock the receiver. You must lock the receiver in order to put any locks into effect. If you unlock the receiver, leave the locks unchanged, and then lock the receiver again, the same locks will be in effect as before.

Note: The tables containing the code number you need to program your remote to control a VCR can be found in the instructions that came with the remote.

Or: Highlight each digit of the VCR code, and then press the Up or Down arrow button until you reach the correct number and then press Select.

Make sure the VCR is turned ON and the switch is set to 3 or 4 (whichever you use). Insert a rewind tape on which you want to record. The receiver starts the VCR recording, but does not turn ON the VCR, so you must do this yourself.

6. To test the new code, highlight the **Test** option. The receiver displays a message warning you to make sure the VCR is turned ON.
7. Press the Select button to start the test. Your VCR records for a few seconds, stops, and then rewinds. The receiver displays a message saying that your VCR test is complete. Follow the instructions on the message. If your VCR did not do the test, enter another code from the table. Repeat step 6 and this step.

Once you have found the correct VCR code:

Either: Select the **Save** option to save the VCR code you entered and return to the **Installation and Setup** menu,

Or: If you want to return to the **Installation and Setup** menu without saving the VCR code just entered, press the Cancel button.

USING LOCKS

HOW TO SET LOCKS: A TWO STEP PROCESS

1. Create the locks that you want.
2. Lock the receiver.

Once the receiver is locked, anyone who wants to access locked items must enter the password.

WHEN YOU HAVE LOCKED THE RECEIVER

- If you try to access a locked item or open the **Parental and System Locks** menu, the receiver displays a message prompting you to enter the password.
- The receiver allows you three tries to enter the correct password.

If you fail to do this, the receiver does not allow more tries for several minutes.

- If you enter the correct password, you can access the locked item or open the **Parental and System Locks** menu.
- If you exit a locked item or close the **Parental and System Locks** menu, you must enter the password again to access the item or open the menu again.

CREATING A PASSWORD

You must lock the receiver for any receiver Parental Locks you set to take effect. To lock the receiver, you must first create a password. If you forget your password, you will need to speak with a Customer Service Representative.

To create a password:

1. Press the Menu button to display the **Main** menu. 
2. Select the **Locks** option to display the **Parental and System Locks** menu. 

Note: If the receiver displays a message prompting you to enter a password, the receiver has already been locked.
3. Select the **Lock System** option. The receiver displays a message prompting you to enter a password. 

Note: If this option appears as **Unlock System** instead, the receiver is already locked.
4. Enter and verify a password, using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password.
5. **Write down the password and put it in a safe place.** From now on, you must enter this password to lock or unlock the receiver.
6. Highlight and select the **OK** option. Re-enter the password. All the locks you have set are now in effect.

CREATING OR CHANGING RATING (CONTENT) CODE LOCKS

Do the following to set program locks based on rating codes. Then, when the receiver is locked, only someone who knows the password can watch these programs.

1. Press the Menu button. 
2. Select the **Locks** option. 

ATTENTION!



If you forget your password, you will need to call the Service Center. You may need to provide the following information: (1) your name; (2) your address; (3) your telephone number; (4) the receiver serial identification number; and (5) your Personal Identification Number (PIN), if used.

ATTENTION!



Please be aware of the following:

The locks use the codes that the original program providers assigned to the programs. The actual content of the programs may differ from their assigned ratings. No rating system can guarantee that all objectionable material is screened out. Like all other locks, these locks are only in effect when the receiver is locked.

You can lock any program, including pay per view programs. The locks built into some televisions do not apply to satellite programs.

Television program ratings differ from movie ratings.

If the receiver is locked, enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option. Press the Select button.

3. Select the **Ratings Locks** option. 

Highlight the rating that corresponds to the lowest acceptable audience age. Press the Select button to lock the highlighted rating.

Note: All ratings that are more restrictive than the selected rating are also selected. For example, if you lock PG-13 rated programs, then all programs with the R, NC-17, and NR/AO ratings are also locked.

4. Select the expanded rating code(s), if you want to also lock these ratings.
5. To unlock a rating code, highlight the code and press Select.
6. Select the **Save** option to save the changes.
7. If the receiver is not locked, you must lock it to put the locks you just created into effect.

CREATING OR CHANGING CHANNEL LOCKS

Note: You can lock any channel, including pay per view channels.

1. Press the Menu button. 
2. Select the **Locks** option. 
3. If the receiver is locked, enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option. Press the Select button.

Select the **Channel Locks** option. 

4. Highlight the channel that you want to lock. If necessary, press the Up or Down arrow button to see the desired channel. You can also enter each channel number using the number pad buttons.
5. Press the Select button to lock or unlock the highlighted channel. If the checkbox next to the channel has a checkmark, the channel is locked.
6. Select the **Save** option to save the changes.

If the receiver is not already locked, you must lock it to put the locks you just created into effect.

LOCKING THE RECEIVER

1. Press the Menu button.



2. Select the **Locks** option.



3. Select the **Lock System** option.



The receiver displays a message prompting you to enter a password.

Note: If this option appears as **Unlock System** instead, the receiver is already locked.

4. Enter and check a password, using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. Write down the password and put it in a safe place. From now on, you must enter this password to lock or unlock the receiver.
5. Select the **OK** option. Enter the password again.

UNLOCKING THE RECEIVER

If you unlock the receiver, leave the locks unchanged and then lock the receiver again, the same locks will be in effect as before.

1. Press the Menu button to display the **Main Menu**.



2. Select the **Locks** option.



3. With the receiver locked, you must enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option.

4. Press the Select button.



5. Select the **Unlock System** option.

If this option appears as **Lock System** instead, the receiver is already unlocked.

LOCKING THE RECEIVER FRONT PANEL CONTROL BUTTONS

This keeps anyone from changing the channel, but it does not lock the remote control buttons.

Tip: You can lock the receiver front panel control buttons but this does not lock the remote control buttons.

To lock the receiver front panel buttons, do the following:

1. Press the Menu button.



2. Select the **Locks** option.



If the receiver is locked, enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option. Press the Select button.

3. Select the **Front Panel Lock** option.



4. Select the **Yes** option.

5. If the receiver is not locked, you must lock it to put the lock you just created into effect.

UNLOCKING THE RECEIVER FRONT PANEL CONTROL BUTTONS

To unlock the receiver front panel buttons, you must use the remote control.

1. Press the Menu button.



2. Select the **Locks** option.



If the receiver is locked, enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option. Press the Select button.

3. Select the **Front Panel Lock** option.



4. Select the **Yes** option.

LOCKING PAY PER VIEW PROGRAMS

This locks all pay per view channels.

You also can lock one or more pay per view channels by using channel locks or rating locks.

1. Press the Menu button. 

2. Select the **Locks** option. 

If the receiver is locked, enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option. Press the Select button.

3. Select the **Lock PPV** option. 

4. If the receiver is not locked, you must lock it to put the lock you just created into effect.

To unlock pay per view programs:

5. Press the Menu button. 

6. Select the **Locks** option. 

If the receiver is locked, enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option. Press the Select button.

7. Select the **Unlock PPV** option. 

Note: When you select this option, you unlock all pay per view channels.

Note: If you use a password to unlock a one-time event, all other pay per view channels remain locked.

HIDING ADULT CHANNELS

This keeps the **Program Guide**, **Themes** lists, and the **Browse Banner** from displaying adult channels. It keeps anyone from choosing such channels by using the Up or Down arrow buttons or the remote control number pad buttons.

Note: If your receiver has the **Adult Chan** Favorite List, and you **Hide Adult Channels**, this list will not appear anywhere, including the **Program Guide** and **Favorite List** menu.

To hide adult channels, do the following:

1. Press the Menu button. 

Tip: If this option appears as **Unlock PPV** instead, pay per view programs are already locked.

Tip: If the receiver displays a message prompting you to enter a password, it already has been locked.

2. Select the **Locks** option. 

If the receiver is locked, enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option. Press the Select button.

3. Select the **Hide Adult** option. 

Note: If this option appears **Unhide Adult** instead, the adult channels are already hidden.

4. If the receiver is not locked, you must lock it to put the lock you just created into effect.

To un-hide adult channels, do the following:

1. Press the Menu button.



2. Select the **Locks** option. 

If the receiver is locked, enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option. Press the Select button.

3. Select the **Unhide Adult** option. 

ACCESSING A LOCKED ITEM, OR OPENING THE LOCKS MENU

1. Select an item that is locked. To open the **Parental and System Locks** menu, select the **Locks** option on the **Main Menu**.
2. The receiver displays an **Attention** message telling you that the item or menu is locked.
3. Enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option.
4. Press the Select button.

CHANGING THE RECEIVER PASSWORD

1. Press the Menu button. 
 2. Select the **Locks** option. 

If the receiver is locked, enter the password using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option.
 3. Press the Select button.
 4. Select the **Change Password** option. 
 5. Enter the current password using the number pad buttons.
As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option.
 6. Press the Select button.
 7. Enter the new password using the number pad buttons.
As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option.
 8. Either: Select the **OK** option to change the password.
Or: If you do not want to change the password, press the Cancel button or select the **Cancel** option. You can stop here.
 9. Enter the new password again for checking, using the number pad buttons. The receiver displays stars (*) as you enter the digits of the password. As soon as you enter the fourth digit of the password, the receiver highlights the **OK** option. Press the Select button.
- Write down the new password and put it in a safe place.** From now on, you must enter this password to lock or unlock the receiver.

PERSONAL IDENTIFICATION NUMBER

You can set up a Personal Identification Number (PIN) for call-in requests only. Anyone calling the Customer Service Center must provide this PIN to make any changes to your account. You may call the Customer Service Center at any time to set up a PIN.

If you forget your PIN, you will need to speak with a Customer Service Representative. The representative may ask for more information to make sure that you are authorized to make changes to your account.

RESETTING THE RECEIVER

If you want to reset the receiver to be the same as when it was shipped from the factory, do the following:

Tip: You can choose an alternate language (if available) but this applies only to the audio part of a program and does not change the language used in the menus displayed by the receiver.

Note: Resetting the receiver discards all Favorite Lists except the **All Chan** and **All Sub** lists.

Note: If you have set any locks on the receiver, and the receiver is locked, these locks will be kept. If the receiver is unlocked, any such locks will be lost. You cannot reset the receiver to default settings to discard a password you have forgotten. Nobody can reset the receiver to bypass a receiver lock.

1. Press the Menu button. 
2. Select the **System Setup** option. 
3. Select the **Installation** option. 
4. Select the **Factory Defaults** option. The receiver displays a **Warning** message, prompting you to confirm that you want to reset the receiver.
5. Select the **Yes** option to confirm the reset. The receiver resets, and then displays the **Installation and Setup** menu.

CHANGING PROGRAM LANGUAGES

You may be able to change the language of some programs. An alternate language may not be available for all programs. Some programs, such as movies, show at the start whether an alternate language is available. An alternate language applies only to the audio part of a program and does not change the language used in the menus displayed by the receiver.

1. Press the Menu button. 
2. Select the **System Setup** option. 
3. Select the **Alternate Audio** option. 
4. Select the language you want in the **Languages** list.

Note: If the program is available in a language not listed, then selecting the **Alternate** option selects that language. If the program is available only in the listed languages, then selecting the **Alternate** option selects English.

5. Either: Select the **Save** option to save your language choice. The receiver displays the **System Setup** menu.

Or: Press the Cancel button to cancel any changes. The receiver displays a confirmation menu. At that menu:

Either: Select the **Yes** option to discard any language changes.

Or: Select the **No** option to save any language changes.

CONTROL OTHER DEVICES WITH THE REMOTE

REMOTE CONTROL MODES

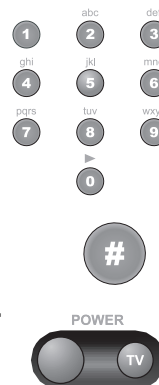
You can set the remote to four different modes to control the receiver or other devices.

To set the remote to the right mode for a device, use the remote control's mode buttons, Sat (satellite receiver), TV, VCR (for a VCR or a DVD player), and Aux ("auxiliary," for a cable TV box, a tuner, or an audio amplifier). To change the mode, press the button for the device you want the remote to control. The mode button flashes once to show you've set the remote to that mode. This section explains how to set up the remote to control a device, such as a satellite TV receiver, a TV, a VCR, a cable TV box, a tuner, or an amplifier.

1. Turn ON the device you want the remote to control, using the device's buttons or the remote control that came with the device.
2. Find the brand name of the device in the tables that start on "Device Codes" on page 105. If the brand is not listed, see *Scan for Device Codes* on page 56.
3. Press and hold the mode button for the device that you want the remote to control, for about three seconds. When all the other mode button backlights come on, release the mode button.
4. Use the number buttons to enter the code for the device.

Note: For the **AUX** mode, you must enter a 4-digit code. The first digit is the code for the device, as follows: 0 is for a second TV, 1 is for a second VCR, and 2 is for an audio amplifier or cable TV box.

5. Press and release the Pound (#) button. If the code is valid, the mode button backlight blinks three times.
6. Test if the code works for the device by pressing the Power button. If the code works, the device should turn OFF.



Tip: You can use the remote that came with your receiver to control as many as three other devices. But *first* you must program the remote to do this.

7. Turn the device back ON and try some other buttons to make sure they work. Sometimes, the Power button may work when other buttons do not. If the code works for other buttons, stop here.
8. If the code you entered does not work, repeat steps 3 through 7 using another code from the tables.
9. If you have tried all of the codes listed for the device without success, or if you cannot find the device brand name in the tables, see *Scan for Device Codes* on page 56.

CONTROL A TV (OR A SECOND TV)

TV MODE BUTTON

To use the remote to operate a television, then you must press the **TV** mode button to set the remote to **TV** mode. The **TV** mode button's back light turns ON to show that the remote is set to **TV** mode. Make sure to keep the remote in **TV** mode to use the buttons as described in this section.

TV / VIDEO



TV/VIDEO BUTTON

If the TV has video input options, use this button to switch the TV among those options.

POWER



POWER BUTTON

Press this button to turn the television ON or OFF.

MUTE



MUTE BUTTON

Press this button to turn off the sound. Press it again to restore the sound.

VOLUME



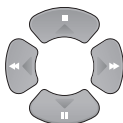
VOLUME BUTTON

Press the left-hand, minus (-) side of this button to lower the sound volume. Press the right-hand, plus (+) side of this button to raise the sound volume.



SELECT BUTTON

The **Select** button works as the **Enter** button for a TV.



UP/DOWN (ARROW) BUTTONS

Use the **Up/Down** arrow buttons to change channels on the TV.



Press this button to return to the last channel you were watching. Press it again to switch between the last two channels that you watched.



Use these buttons to enter numbers in a menu, or to go directly to a new channel.

CONTROL A VCR (VIDEOCASSETTE RECORDER) OR SECOND VCR

ATTENTION!	Some of the features described below may not apply to the VCR. See your VCR owner's manual for details about the VCR's features. If a remote control button is not described in this section, it does not work in VCR mode.
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To use the remote to operate a VCR, you must first set up the remote to control the VCR, then you must press the **VCR** mode button to set the remote to **VCR** mode. The **VCR** mode button's back light turns ON to show that the remote is set to **VCR** mode. Make sure to keep the remote in **VCR** mode to use the buttons as described in this section.

ATTENTION!	You must set the remote control to VCR mode to set it up to control a DVD player. You must set the remote control to VCR mode to use it to control a DVD player.
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Press this button to turn off the sound. Press it again to restore the sound.



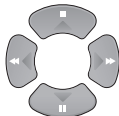
Press the left-hand, minus (-) side of this button to lower the sound volume. Press the right-hand, plus (+) side of this button to raise the sound volume.

Tip: To operate another device such as a VCR, you *must first set up the remote to control the VCR*, and then press the VCR mode button on the remote.



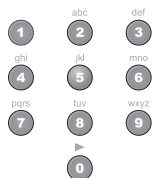
SELECT BUTTON

The **Select** button works as the **Play** button. Press this button to play or to resume playing a videotape.



UP/DOWN/LEFT/RIGHT (ARROW) BUTTONS

- The Up arrow button works as the Stop button. Press this button to stop a videotape.
- The **Down** arrow button works as the Pause button. Press this button to pause a videotape. Press this button or the Select button (Play) to restart the tape.
- The Left arrow button works as the Rewind button. Press this button to rewind a videotape.
- The Right arrow button works as the Fast Forward button. Press this button to forward a videotape.



NUMBER BUTTONS

Use these buttons to enter numbers in a menu.

CONTROL A CABLE TV BOX

ATTENTION!



Some of the features described below may not apply to the cable TV box. See your cable box owner's manual for details about the box's features. If a remote control button is not described in this section, it does not work for a cable TV box.



AUX MODE BUTTON

To use the remote to operate a cable TV box, you must first set up the remote to control the cable box, then you must press the AUX mode button to set the remote to **AUX** mode. The AUX mode button's backlight turns ON to show that the remote is set to **AUX** mode. Make sure to keep the remote in **AUX** mode to use the buttons as described in this section.

Tip: Some of the features described in this section may not work with your cable TV box. If a remote control button is not described in this user guide, it will not work with the device you want to control.

MUTE

**MUTE BUTTON**

Press this button to turn off the sound. Press it again to restore the sound.

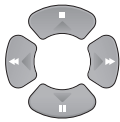
VOLUME

**VOLUME BUTTON**

Press the left-hand, minus (-) side of this button to lower the sound volume. Press the right-hand, plus (+) side of this button to raise the sound volume.

**SELECT BUTTON**

The **Select** button works as the **Enter** button for the cable box.

**UP/DOWN (ARROW) BUTTONS**

Use the **Up/Down** arrow buttons to change channels on the cable box.



RECALL

RECALL BUTTON

Press this button to return to the last channel you were watching. Press it again to switch between the last two channels that you watched.

**NUMBER BUTTONS**

Use these buttons to enter numbers in a menu.

**STAR BUTTON**

Use this button to set up the remote control in **AUX** mode.

CONTROL A TUNER OR AMPLIFIER**ATTENTION!**

Some of the features described below may not apply to the tuner or amplifier. See the device owner's manual for details about the device's features. If a remote control button is not described in this section, it does not work for a tuner or amplifier.

Tip: You can scan for device codes as described at the right, or look up the device codes for other devices beginning on page 105.



AUX MODE BUTTON

To use the remote to operate a tuner or amplifier, you must first set up the remote to control the device, then you must press the AUX mode button to set the remote to **AUX** mode. The AUX mode button's backlight turns ON to show that the remote is set to **AUX** mode. Make sure to keep the remote in **AUX** mode to use the buttons as described in this section.



MUTE BUTTON

Press this button to turn off the sound. Press it again to restore the sound.



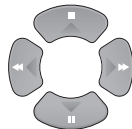
VOLUME BUTTON

Press the left-hand, minus (-) side of this button to lower the sound volume. Press the right-hand, plus (+) side of this button to raise the sound volume.



SELECT BUTTON

This button works as the **Input Select** button for a tuner or amplifier.



UP/DOWN (ARROW) BUTTONS

Use these buttons to change channels on the tuner or amplifier.



STAR BUTTON

10. Use this button to set up the remote control in **AUX** mode.

Scan for Device Codes

1. Use the device's buttons or its remote control to turn it on.
2. Press and hold the mode button for the device, for about three seconds. When all the other mode buttons light up, let go of the button. For example, hold the TV button for a TV.
3. Only for the Aux mode, use the number buttons to enter 0 for a second TV, 1 for a second VCR, or 2 for a tuner or amplifier. For any other mode, skip to step 5.
4. Only for the Aux mode, press the Star (*) button. For any other mode, skip to step 5.



5. Press the blank **Power** button.
6. Press the up or down arrow button to set the remote to the next code. The up arrow button scans ahead and the down arrow button scans back. Press the button again to go on with the scan.
7. If the remote reaches the correct code, the device turns off. When this happens, press the **Pound (#)** button to store the code in the remote. If the code works, the mode button flashes three times.



8. Press the blank **Power** button to turn the device back on.
9. Try some other buttons to make sure they work. Sometimes, the blank **Power** button works when other buttons don't.



Note: The mode button for the device starts to flash if you've scanned all the codes for that device.

Try the Device Codes

Note: If you just did *Scan for Device Codes*, you don't need to do this.

1. Use the device's buttons or its remote control to turn it on.
2. Find the brand name of the device in the tables on page 105. If the brand isn't listed, please see the section titled *Scan for Device Codes*, below.
3. Press and hold the mode button for the device you want the remote to control, for about three seconds. When all the other mode buttons light up, let go of the mode button.
4. Only for the **Aux** mode, use a number button to enter 0 for a second TV, 1 for a second VCR, or 2 for a tuner or amplifier. For any other mode, skip to step 5.
5. Use the number buttons to enter a device code from the table.
6. Press the **Pound (#)** button. If the code works, the mode button flashes three times.

7. Press the blank **Power** button to test if the code works for the device. If it does, the device should turn off.
8. Turn the device back on and try some other buttons to make sure they work. Sometimes, the blank **Power** button works when other buttons don't. If the code works for other buttons, stop here.



9. If the code you entered doesn't work, do steps 3 through 8 again with another code from the tables.

Check the Device Codes

You can find out what device code you've set for each remote mode.

Tip: The procedure at the left explains how to find out the device code you set for each remote control mode.

Tip: Before you do the telephone test, make sure that an active telephone line is connected to the Telephone Jack on the receiver back panel.

Here's what to do:

1. Press and hold the mode button for the device, for about three seconds. When all the other mode buttons light up, let go of the mode button.
2. Press the **Pound (#)** button twice. The mode button flashes the number for each digit of the device code, with a pause between the groups of flashes. A quick flash is for zero. For example, the mode button flashes five times, pauses, flashes seven times, pauses, and flashes once quickly for the 570 code.



TESTING THE SYSTEM

STARTING A TEST

1. Press the Menu button. 
2. Select the **System Setup** option. 
3. Select the **Diagnostics** option. 

TELEPHONE CONNECTION TEST

This test checks that the receiver telephone connection is correct. Select the **Connection** option to begin the test. The receiver displays a message asking you to wait until the test is done.

- If the telephone connection is correct, the receiver displays a **Phone Connection OK** message.
- If the receiver highlights the **Cancel** option, you must choose the **Dial Out** option so the receiver can make a toll-free call to the Customer Service Center. Press the remote control Select button to start the call. The receiver displays a message asking you to wait until the call is done. When the call is done, select the **Cancel** option to exit the test menu.
- If the telephone line is not connected properly, the receiver displays a failure message. In this case, check the telephone connection and then repeat the test.

Note: If you have the receiver connected to a DSL (Digital Subscriber Line) phone line, it may cause this test to fail. If so, you will need to install a DSL filter between the receiver and the phone jack on the wall. You should be able to get a DSL filter from your DSL provider, or your local electronic parts store.

Chapter 4

Installation Instructions

HOW TO USE THESE INSTRUCTIONS

These instructions guide you through the installation of a Satellite System which includes your DishPro receiver (included with this manual), and one of two kinds of dish antenna systems. The two antenna systems are:

- **DishPro** antenna systems which can be identified by the DishPro logo shown below.



- **Legacy** antenna systems which do not have the DishPro logo.

Important: You cannot use DishPro LNBFs and switches (those marked with the DishPro logo) with Legacy switches and LNBFs (those without the DishPro logo). You must install your DISH antenna system with either all DishPro LNBFs and switches or all Legacy LNBFs and switches. If you mix the two, the system will not work.

Note: If you have a Dish antenna system already installed, and the dish has been pointed for the strongest possible signal strength, you can skip this chapter and go directly to *Appendix A* to install the satellite receiver in an existing system.



Tighten all the coaxial cable connections only by hand. Using a wrench may over-tighten the connections, causing damage. Such damage is not covered by the Limited Warranty in the User Guide that came with the system.

INSTALLING A DISH 500 ANTENNA

Whether you are installing a DishPro or Legacy system, you will need to first assemble the satellite dish, mount it, and point it in the general direction of a satellite. To do this, follow these instructions:

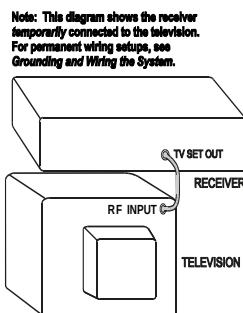
FINDING THE SATELLITES

You need to find the satellites in the sky. To do this, you need to know the azimuth angle (the south, southeast, or southwest direction to the satellites) and the elevation angle (the angle up to the satellites) from your location, and the skew angle.

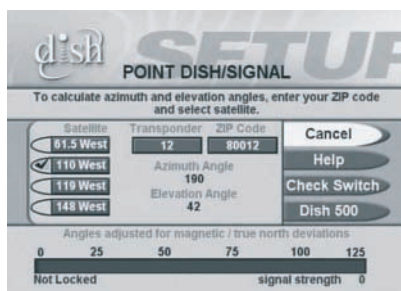
Installation Instructions

Do the following to get these angles:

1. Connect the **TV Set Out** port on the receiver's back panel to the television's **RF Tuner Input** using a coaxial cable. Make sure that the TV is tuned to the same channel as the **Channel 3/4 Switch** on the receiver's back panel (for example, if this switch is at "3," the TV must be tuned to Channel 3).



2. Make sure that the remote control batteries are fresh, and are installed properly. Press the SAT mode button on the remote to make sure the remote is in **SAT** mode to control the satellite receiver.
3. Turn ON the television and receiver.
4. Display the **Point Dish/Signal** menu, by opening the **Main Menu** and pressing 6-1-1 (unless the receiver already displays this menu).



5. Enter your ZIP code in the **ZIP Code** field.
6. Select the **Dish 500** option.
7. The receiver displays the **Dish 500 Setup** menu. The menu displays the azimuth, elevation, and skew angles as shown below. Write down these numbers:

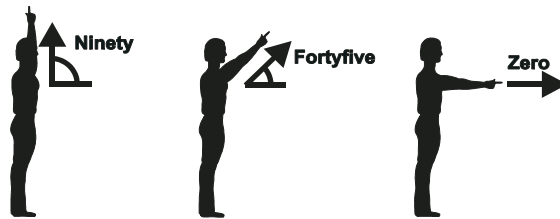
Azimuth: _____ **Elevation:** _____ **Skew:** _____

8. Select **Cancel** to exit out of this menu and return to the **Point Dish/Signal** menu.

MOUNTING THE DISH

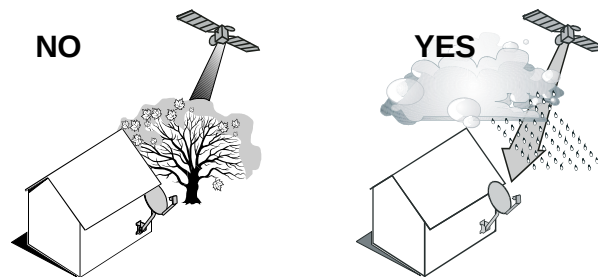
1. Using these azimuth, and elevation angles, find a location for the satellite dish which can be pointed towards the satellites located at

these angles. With a compass, find the required azimuth angle. Then, use the elevation angle to find out how high the satellites are in the sky from your location.

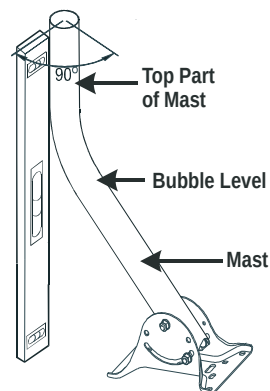


Make sure nothing blocks the line of sight to the satellites.

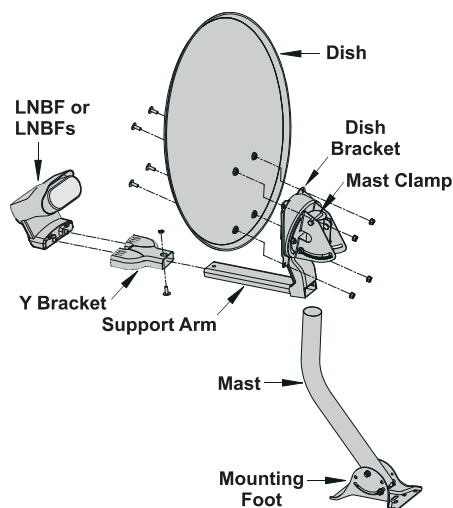
2. Make sure nothing blocks the line of sight to the satellites. Mount the mast to a solid surface so that the dish antenna cannot move or be bumped out of adjustment. Keep in mind that physical and environmental conditions can block your satellite dish's ability to receive a clear satellite signal. Make sure you mount the dish so there are no obstacles between the dish and the satellite. This will help keep the signal strength will remain strong even in bad weather. Obstacles that can block the signal include eaves and overhangs on your building or house, wind, plant growth, and deterioration of the mounting surface. Never mount to a tree.



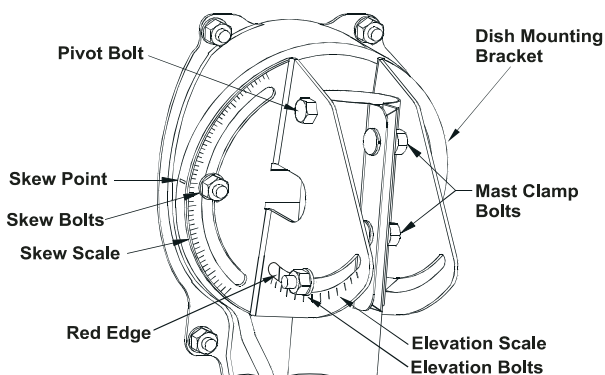
3. Align the top part of the mast so that it is absolutely vertical, as shown below. If the top part of the mast is off vertical by only a few degrees, it will be difficult or maybe even impossible for you to find the satellites. Take at least two readings with a bubble level, on the upper mast, that are 90 degrees apart from one another.



4. Assemble the satellite dish as shown below.



5. Loosen both skew bolts and set the skew by rotating the dish mounting bracket to align the red mark with the required angle on the skew scale which you wrote down on page 60. Tighten the skew bolts securely to keep the dish from rotating. Once the skew is set, do not try to fine-tune this angle when aiming the dish.



6. Set the elevation by tilting the dish mounting bracket to align the red edge with the required angle on the elevation scale. Tighten the elevation bolts, but do not tighten the pivot bolt at this time.

INSTALLING A DISHPRO DISH 500 SYSTEM

The following instructions are for installing a DishPro receiver in a system with a DishPro Twin LNB. If you are installing a multi-dish system, you will need to follow these instructions and then the ones that begin on page 67. If you are installing a DISH 500 with Legacy LNBFs (with no DishPro logo), go to *Installing a DISH 500 Legacy System* beginning on page 75.

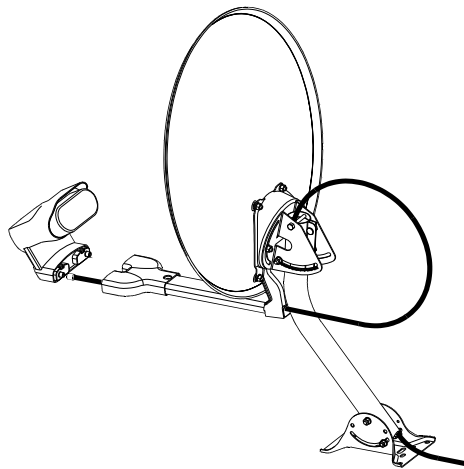
Note: DishPro systems have LNBFs and switches with the DishPro logo shown below.



Important: You cannot use DishPro LNBFs and switches (those marked with the DishPro logo) with Legacy switches and LNBFs (those without the DishPro logo). You must install your DISH antenna system with either all DishPro LNBFs and switches or all Legacy LNBFs and switches. If you mix the two, the system will not work.

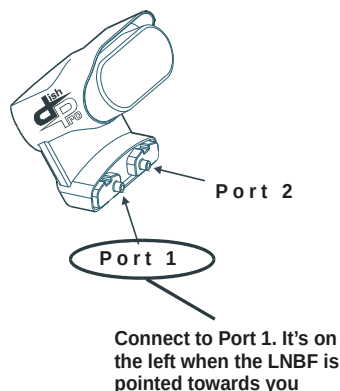
Note: Since you are installing an all-DishPro system, you can have as much as 200 feet of cable between the LNBF and the receiver so long as you use only RG-6 coaxial cables rated for 950 to 2150 MHz. Some cables may say “Swept tested for 2150 MHz.” If you have any doubt about this, ask your Dish retailer, or look on the container the cable came in. Do not use cable company TV cables or cables from other satellite TV systems not rated for 950-2150 MHz. These other cables may cause signal loss. Do not use existing cables such as RG-59. Also, be sure that any outdoor connections are made using waterproof “F-connectors.”

1. Thread the RG-6 coaxial cable through the mast (optional), support arm and the Y-bracket. This cable should be long enough to run from your receiver to your LNBF. See *Grounding the System* on page 91 for detailed cable installation instructions.

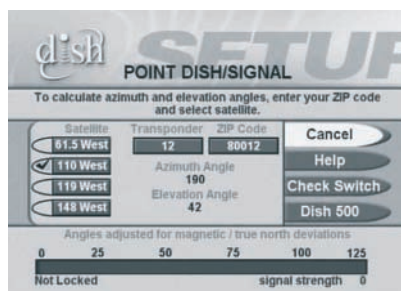


2. Attach the Y-bracket, using the Y-bracket screw.
3. Connect the RG-6 cable from the DISHPro **Satellite In** connection on the back of the receiver directly to port 1 of the DISHPro Twin LNBF, as shown below.

Be sure there are no multi-dish switches between the LNB and the receiver.



4. Attach the LNB to the Y-bracket, using the two LNB screws.
5. Slide the dish assembly down onto the mast. Make sure the pivot bolt rests on the top of the mast. Turn the dish assembly so that it points in the general direction of the satellites, using the azimuth angle from page 60.
6. You should see the **Point Dish/Signal** menu. If not, open the **Main Menu**, select **System Setup**, then **Installation**, then **Point Dish/Signal** or press 6-1-1 on the remote.

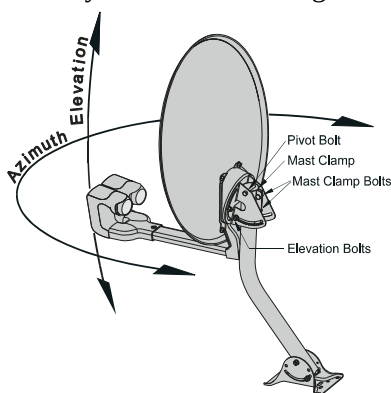


7. Select **Check Switch**. The **Check Switch** screen will open.
8. **Select Check**. The receiver shows you a message that it is checking the switches.
9. When the check switch procedure finishes, you should see an installation summary screen similar to the one shown on the following page. In the **Satellite** line, you should see the word "Conn," twice. In the **Device** line, you will see the word "Twin" twice. In the LNB line, you should see "Twin-1." This indicates that your receiver has confirmed the connection with Port 1 on your DishPro Twin LNB is working. If your **Installation Summary** screen matches this, you can go directly to step #10. If not, do one of the following:
 - If "Xs" appear in the **Satellite** line, tighten all the connections in your system, and then select Retest to run **Check Switch** again.

- If “Twin-2” is in the **LNBF** line, your receiver is connected to Port 2 of the DishPro Twin LNBF. Disconnect the cable and reconnect it to Port 1 of the LNBF, and then select **Retest** to run **Check Switch** again.
- If, by chance, you happened to pick up a satellite at this point, you may see “110” or “119” in the Satellite line. If “119” shows under **Dish Input 1**, then go to step #10. If “119” shows under **Dish Input 2**, move the dish about 9 degrees to the east, and then select **Retest** to run **Check Switch** again. If “110” shows under **Dish Input 2**, then go to Step #10. If “110” shows under **Dish Input 1**, move your dish about 9 degrees to the west, and then select **Retest** to run **Check Switch** again.



10. Select **OK** to return to the **Point Dish/Signal** screen. Make sure the check mark is next to **119 West**. If not, move the highlight to **119 West** and press Select. Notice the signal strength bar. This is used to help you aim the dish by showing the strength of the signal you are receiving. Look at the signal strength bar while you aim the dish. Or, have one person aim the dish while another watches the signal strength or listens to the signal tone. Don't stand in front of the dish while you aim it, because your body will block the satellite signal. After you adjust the aim, let go of the dish so that it can settle back in place by itself. **Do not change the skew setting.**
11. Turn the dish back and forth **very slowly**, until the signal strength bar turns green. This shows you've found the signal.



Note: If you cannot find the signal, turn the dish back to the first azimuth angle. Then, loosen both elevation bolts just enough so you can tilt the dish. Tilt the dish up by two degrees, and then tighten both bolts. Now, turn the dish back and forth again. If you still can't find the signal, tilt the dish up again very slightly and turn the dish back and forth until you find the signal.

12. Once the signal strength bar is green, turn the dish back and forth **just a little**, to where the signal strength bar shows the strongest signal. When you find the strongest signal, tighten both mast clamp bolts. Then loosen both elevation bolts, just enough so you can tilt the dish. Tilt the dish up and down **just a little**, to where the signal strength bar shows the strongest signal. **Do not adjust the skew.** When you find the strongest signal, tighten all bolts in the dish assembly so the dish cannot be moved.
13. You are now ready to verify reception from both satellites. Select the **Check Switch** option. When the **Check Switch** menu opens, select **Check**. The receiver shows you a message that it is checking the switches. When the procedure is finished, you will see an **Installation Summary** screen similar to the one shown below. However, you must see that you have **signals from both the 110 West and 119 West** Satellites, you see "All" twice in the **Transponder** line, and the message "Satellite reception verified." Select **Cancel** to exit this menu."



If you do not see "110," under **Dish Input 2:**

- Check to make sure the skew angle you wrote down on page 60 is exactly the same as the skew angle you set in step #7 on page 60. If it is not, reset the skew angle as described in on page 62. Following this, go back to page 65, and start over from step #10.
 - Recheck your cable connection to Port 1 of the LNBF. If it was connected to Port 2, reconnect to Port 1. Following this, move the dish approximately 9° to the east and restart the procedure at step #7.
14. Look at the **Point Dish/Signal** menu. If you have good signal strength with the check mark in **119 West**, move the check mark to **110 West**. If you have good signal strength on **110 West**, go to step #15. If you do not have good signal strength with the check mark in **110 West**, repeat Step #12, and fine-tune the dish but with the check mark in **110 West** instead of **119 West**. While the **110 West**

and **119 West** signals will not be equal, you should be able to fine-tune the dish until you have the strongest possible signal from both satellites. When you have finished this, select **Check Switch**. When the **Check Switch** menu opens, select **Check** to run **Check Switch** again.

15. Select Cancel to exit the **Point Dish/Signal** menu. An Attention screen will open asking the mounting and positioning of your dish is complete with a “Locked” indication in the Point Dish/Signals screen. If the answer is yes, select **Yes**.

If the answer is No, you will need to repoint your dish following the preceding steps until the mounting and positioning is complete and you do have the “Locked” indication.

16. After you select **Yes**, the receiver will begin taking a software upgrade. You will see a **Warning** that “Vital program information will now be downloaded into your receiver.” You will also see a status bar showing the progress of this upgrade.
17. Once the software upgrade is complete, you will see a message that your receiver’s memory is being upgraded.

While this message is displaying, the green power light on the receiver’s front panel will blink. Do not disturb the receiver while the green light is blinking.

This message may disappear, your screen may go blank for a few minutes, and the green light may continue to blink. This is normal and does not indicate a problem with the receiver.

If you will be installing a multi-dish system, follow the instructions that begin below. If not, skip to the section that begins on page 90 titled *Grounding the System* for instructions on how to ground your system.

INSTALLING A MULTIPLE DISH DISHPRO SYSTEM

Important: You cannot use DishPro LNBFs and switches (those marked with the DishPro logo) together with Legacy switches and LNBFs (those without the DishPro logo). You must install your DISH antenna system with either all DishPro LNBFs and switches or all Legacy LNBFs and switches. If you mix the two, the system will not work.

Note: Since you are installing an all-DishPro system, you can have as much as 200 feet of cable between the LNBF and the receiver so long as you use only RG-6 coaxial cables rated for 950 to 2150 MHz. Some cables may say “Swept tested for 2150 MHz.” If you have any doubt about this, ask your Dish retailer, or look on the container the cable came in. Do not use cable company TV cables or cables from other satellite TV systems not rated for 950-2150 MHz. These other cables may cause signal loss. Do not use existing cables such as RG-59. Also, be sure that any outdoor connections are made using waterproof “F-connectors.”

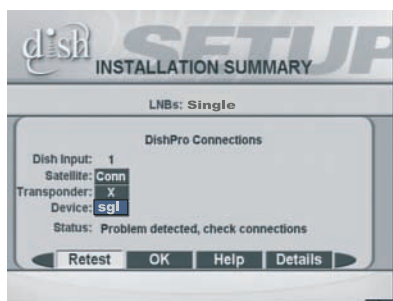
Installation Instructions

Once you have installed the DISH 500 with DishPro LNBFs (using the preceding instructions), you can now install a DISH 300 with a single DishPro LNBF as follows:

1. Turn on the television and the receiver if they are not already on. You should see the **Point Dish/Signal** screen. If not, open the **Main Menu** and press 6-1-1 on the remote.
2. Make sure there is a check mark next to the satellite your dish will be pointing at. If there is not, use the Up and Down arrows on the remote to move the highlight to the box next to the correct satellite, and then press select on the remote.
3. Enter your Zip code to get the necessary azimuth and elevation. Write these down below.

Azimuth:_____ **Elevation:**_____

4. Mount the dish following the mounting instructions that came with it.
5. Connect an RG-6 cable from the **TV Set Out** port on the DishPro receiver's back panel directly to the single DishPro LNBF on the DISH 300. Make sure there are no multi-dish switches between the LNBF and the DishPro receiver (refer to the wiring diagrams that begin on page 84 for detailed cabling instructions).
6. Select **Check Switch** from the **Point Dish/Signal** menu. When the **Check Switch** screen opens, select **Check**.
7. When Check Switch is complete, you will see an Installation Summary screen similar to the one shown below.



It should show a connection (“Conn” next to satellite) and **Single** device under **1** (Dish Input). This means that your receiver is connected to the DishPro single LNBF. If your screen matches this description, go to step #8. If not, do one of the following:

- If “Xs” appear in the Satellite line, check all connections and then select **Retest** to run **Check Switch** again.

•If, by chance, the number for the satellite you want to point at appears on the Satellite line, go to step #8.

8. Select **OK** to exit back to the **Point Dish/Signal** menu.
9. Point the dish for the strongest possible signal, following the instructions that came with it.
10. Connect any switches in your system, using the instructions that came with the switch(es).
11. Select **Check Switch** from the **Point Dish/Signal** menu. When the **Check Switch** menu opens, select **Check**. If the procedure completes, you will see the **Installation Summary** screen again. This time you should see confirmation for all satellites your dish is pointed at. See the satellite your dish is pointed at, and you should also see that the switch(es) in your system has been correctly identified. Refer to the DishPro wiring diagrams for examples of installation summary screens.
12. Select **OK** to exit this menu, and then **Cancel** to exit the **Point Dish/Signal** screen.

Now, turn the page to see alternate DishPro wiring diagrams.

DISHPRO WIRING DIAGRAMS

DISH 500, ONE DISHPRO TWIN LNBF, TWO DISHPRO RECEIVERS

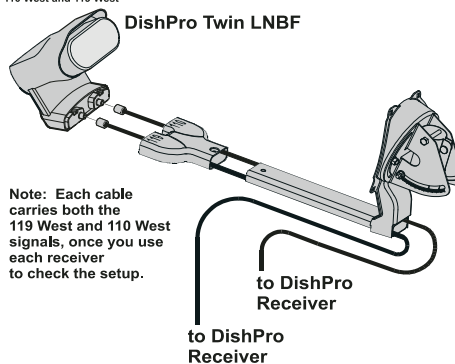


This diagram leaves out grounding to be clear. Make sure you ground the system per the National Electrical Code (NEC) and all local electrical codes. Please see *Ground the System* on page 90 for more information.



DISH 500
110 West and 119 West

DishPro Twin LNBF



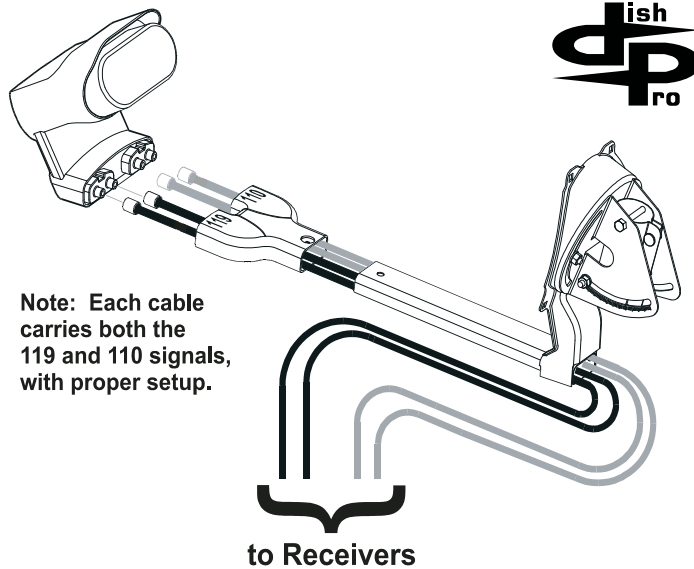
When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to the one shown below.



DISH 500, ONE DISHPRO QUAD LNBF, FOUR CABLES, NO SWITCH, FOUR DISHPRO RECEIVERS



This diagram leaves out grounding to be clear. Make sure you ground the system per the National Electrical Code (NEC) and all local electrical codes. Please see *Ground the System* on page 90 for more information.



When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to the one shown below.

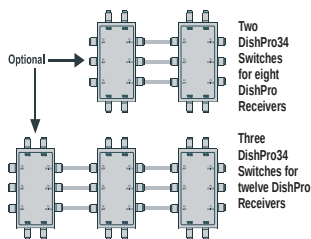
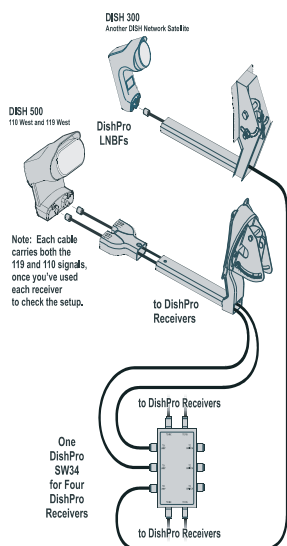


DISH 500 WITH A DISHPRO TWIN LNB, ONE DISH300 WITH A DISHPRO SINGLE LNB, ONE DP34 SWITCH, MULTIPLE DISHPRO RECEIVERS (ALL DISHPRO)

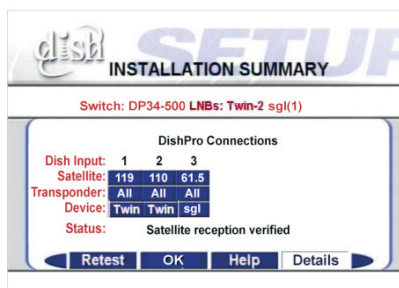
WARNING!



This diagram leaves out grounding to be clear. Make sure you ground the system per the National Electrical Code (NEC) and all local electrical codes. Please see *Ground the System* on page 90 for more information.



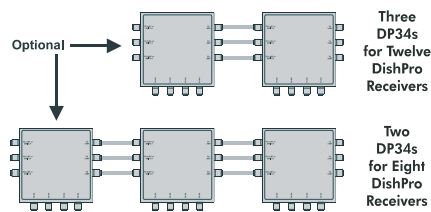
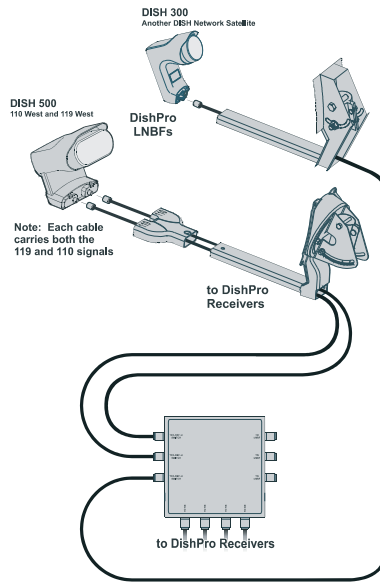
When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to the one shown below.



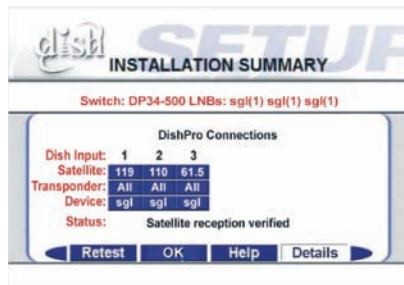
TWO DISHES, THREE SINGLE-OUTPUT DISHPRO LNBs, THREE CABLES, ONE DP34 SWITCH, MULTIPLE DISHPRO RECEIVERS (ALL DISHPRO)



This diagram leaves out grounding to be clear. Make sure you ground the system per the National Electrical Code (NEC) and all local electrical codes. Please see *Ground the System* on page 90 for more information



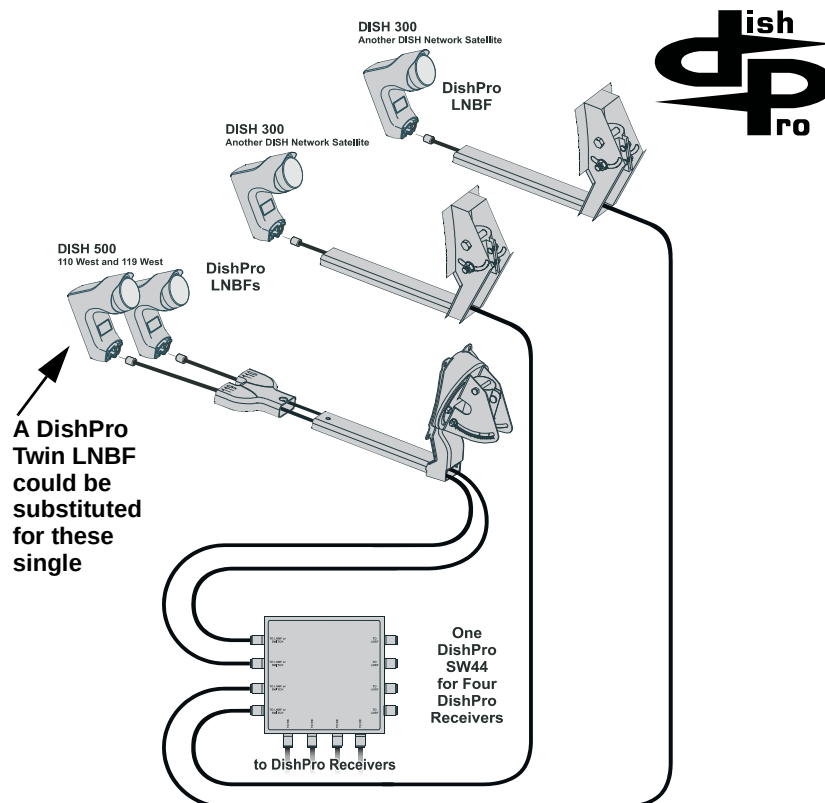
When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to the one shown below.



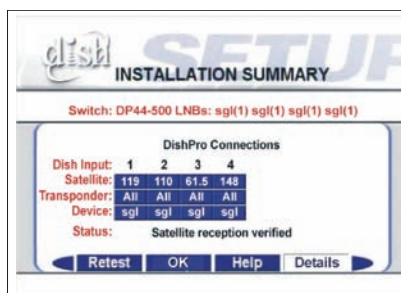
THREE DISHES, FOUR SINGLE-OUTPUT DISHPRO LNBFs, FOUR CABLES, ONE DP44 SWITCH, FOUR DISHPRO RECEIVERS (ALL DISHPRO)



This diagram leaves out grounding to be clear. Make sure you ground the system per the National Electrical Code (NEC) and all local electrical codes. Please see *Ground the System* on page 90 for more information



When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to the one shown below.



INSTALLING A LEGACY DISH 500 SYSTEM

If the LNBFs in your system do not have the DishPro logo, you are installing a Legacy system.

Important: You cannot use DishPro LNBFs and switches (those marked with the DishPro logo) with Legacy switches and LNBFs (those without the DishPro logo).

Note: If you are installing a Legacy system with two single or dual LNBFs, follow the instructions that begin below. If you will be installing a Legacy system with a Twin LNBF, skip the following section and go to page 78.

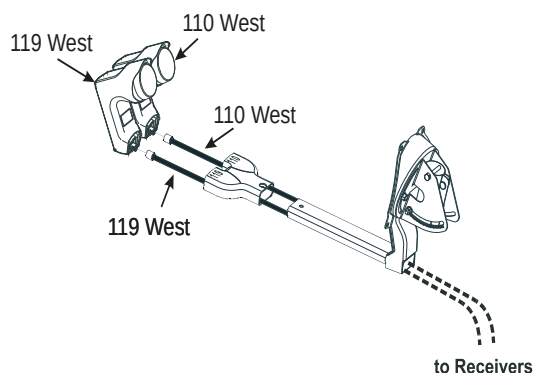
Note: If you are installing a multi-dish system, follow either these instructions or the instructions for installing a system with a twin LNBF, and then follow the instructions that begin on page 81 to complete your system.

FOR INSTALLING A LEGACY DISH 500 SYSTEM WITH TWO SINGLE OR DUAL LNBFs

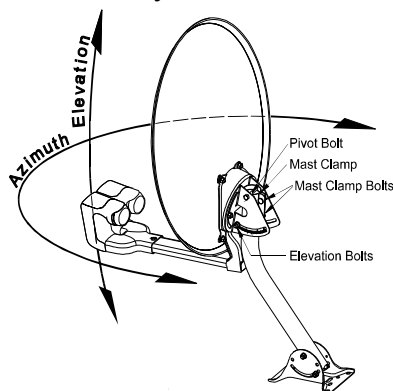
Note: If you are installing a Legacy LNBF (that does not have a DishPro logo), you can have as much as 100 feet of cable between the satellite dish's LNBF connectors and the receiver, so long as you use only RG-6 cable. Also, be sure that any outdoor connections are made using waterproof "F-connectors."

1. Once you have the dish mounted by completing all the steps in the section titled *Mounting the Dish*, label one coaxial cable "119" on both ends, and the other coaxial cable "110" on both ends. These cables need to be long enough to reach from the receiver to the LNBF. If you are installing dual LNBFs and want to support two receivers or multiple dishes (see the *Wiring Diagrams* that begin on **page XX**), you will also need to thread two additional cables. If you do, make sure you also label one cable "119" on both ends, and the other "110" on both ends (the section *Grounding the Dish* (page 90) has detailed cable installation instructions).
2. Thread both coaxial cables through the mast (optional) support arm and the Y-bracket. Make sure the cables labeled "119" are threaded through

the 119 side and the “110” cables are threaded through the “110” as shown.



3. Attach the Y-bracket using the Y-bracket screw. Connect the cables to the LNBs. The LNBs are interchangeable; it does not matter which LNB is connected to the “119” or “110” cable. Attach the LNBs to the Y-bracket using the two LNB screws
4. Slide the dish assembly down on the mast. Make sure the pivot bolt rests on the top of the mast. Turn the dish assembly so that it points in the general direction of the satellite, using the azimuth angle from page 60.
5. Connect the RG-6 coaxial cable from the “119” LNB directly to the **Satellite In** connection on the receiver’s back panel. You may temporarily need to use a female-to-female splice in place of where your switch will go later to do this. Do not connect the multi-dish switch at this time.
6. Turn On the television and the receiver. The **Point Dish/Signal** menu should be displayed. If not, open the **Main Menu** and press 6-1-1 on the remote. Select the **119 West** option if it is not already selected.
7. Make sure the check mark is next to **119 West**. If it is not, move the highlight to **119 West** and press Select on the remote control.
8. Turn the dish back and forth very slowly, until the signal strength bar turns green. This shows that you have found the signal.



Note: If you cannot find the signal, turn the dish back to the original azimuth setting. Then, loosen both elevation bolts just enough to be able to tilt the dish. Tilt the dish up by two degrees, and then tighten both bolts. Now, try turning the dish back and forth again. Repeat these steps, raising and lowering the elevation, until you find the satellite signal.

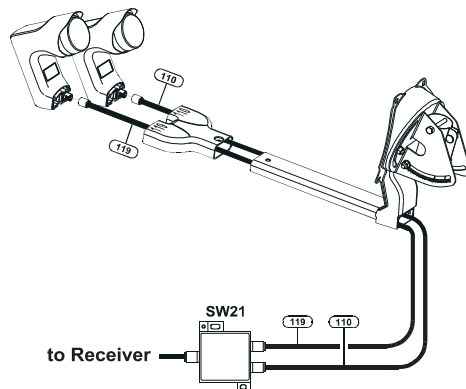
9. Once you have a signal, turn the dish assembly back and forth very slightly until the signal strength bar displays the strongest possible signal strength. Tighten the mast clamp bolts. Then, loosen the elevation bolts and adjust the elevation of the dish up and down slightly until the signal strength bar displays a strong signal. Do not adjust skew. Tighten all the bolts in the dish assembly so that the dish cannot be moved.
10. Once you have the strongest possible signal, press the **Cancel** button on the remote to exit the **Point Dish/Signal** menu. The receiver displays an **Attention** message asking whether the installation is complete. If the answer is yes, select the **Yes** option. The receiver will begin taking a software upgrade. You will see a **Warning** that “Vital program information will now be downloaded into your receiver.” You will also see a status bar showing the progress of this upgrade.
11. Once the software upgrade is complete, you will see a message that your receiver’s memory is being upgraded.

While this message is displaying, the green power light on the receiver’s front panel will blink. Do not disturb the receiver while the green light is blinking.

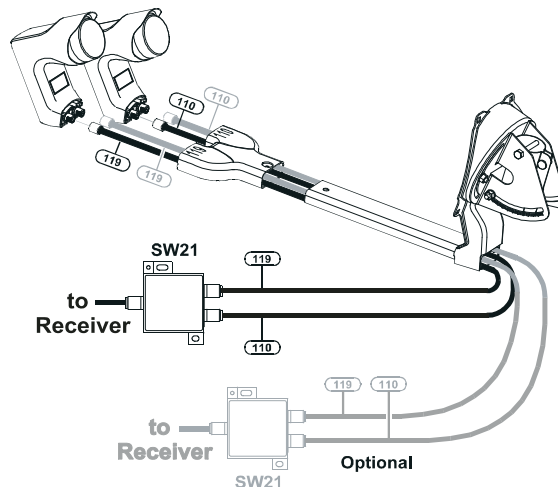
This message may disappear, your screen may go blank for a few minutes, and the green light may continue to blink. This is normal and does not indicate a problem with the receiver.

12. Next, connect the “119” cable from the LNBF to the **Dish 1** connection on the multi-dish switch. Connect the “110” cable from the LNBF to the **Dish 2** connection on the multi-dish switch. Connect a cable from the multi-dish switch to the **Satellite In** port on the receiver’s back panel.

You can use one of the wiring diagrams shown here, or one of the alternate wiring diagrams that begin on page 84.



Two single LNBFs and one SW21 multi-dish switch.



Two dual LNBFS and an SW21 multi-dish switch (second switch optional).

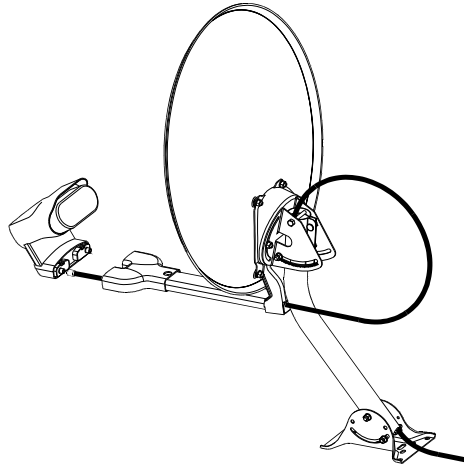
13. Open the **Main Menu** and press 6-1-1 on the remote to again open the **Point Dish/Signal** menu. Select **Check Switch**. The receiver will check your multi-switch installation. After the system checks the installation, you will see the **Installation Summary** screen. Make sure that the correct switch is displayed and that you have “Satellite reception verified” from both the **110 West** and **119 West** satellites.
14. At the **Point Dish/Signal** menu, select the **110 West** option. Verify that you have a green signal strength bar with a locked signal.
 - If the signal from the **110 West** satellite is weak and you do not see a green signal strength bar, repeat step #8 to fine-tune the dish until you have about the same signal strength for both the **119 West** and **110 West** satellites.
 - If there is no signal strength on **110 West**, check your connections and select **Check Switch** again. If there is still no signal strength, check to make sure your skew angle is correct, and start over, beginning with step #1 until you have a good signal from both the **110 West** and **119 West** satellites.
15. Connect any other receivers in the system, and then turn them off so they can take the software upgrade.

FOR INSTALLING A LEGACY SYSTEM WITH A TWIN LNBF

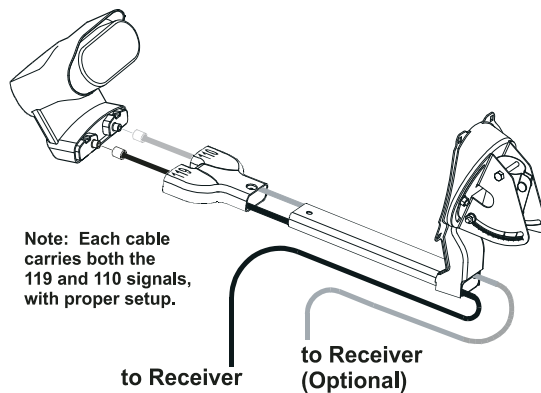
Note: If you are installing a Legacy (non-Dishpro) LNBF (that does not have a DishPro logo), you can have as much as 100 feet of cable between the satellite dish’s LNBF connectors and the receiver, so

long as you use only RG-6 cables. Also, be sure that any outdoor connections are made using waterproof “F-connectors.”

1. Once you have the dish mounted, per the instructions *Installing a DISH 500 Antenna* that begin on page 59, thread the coaxial cable through the support arm, mast (optional), and the Y-bracket. If you are planning on adding a second satellite receiver, thread another cable through the support arm and the Y-bracket. The cable should be long enough to reach from the LNBF on the satellite dish to the receiver (refer to *Ground the System* beginning on page 90 for detailed cabling instructions).

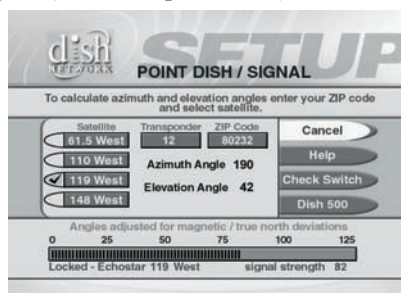


2. Attach the Y-bracket, using the Y-bracket screw.
3. Connect the RG-6 cable from the **Satellite In** connection on the back of the receiver directly to the DISHPro Twin LNBF, as shown below. Be sure there are no multi-dish switches between the LNBF and the receiver.



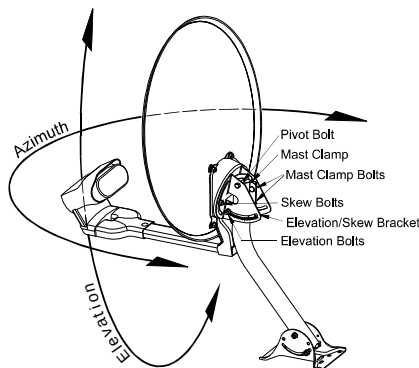
4. Attach the LNBF to the Y-bracket using the two LNBF screws.
5. Slide the dish assembly down on the mast. Make sure the pivot bolt rests on the top of the mast. Turn the dish assembly so that it points in the general direction of the satellite, using the azimuth angle form page 60.
6. Turn On the television and the receiver. The **Point Dish/Signal** menu

should be displayed (see example below).



If not, open the **Main Menu** and press 6-1-1 on the remote. Select the **119 West** option if it is not already selected.

7. Turn the dish back and forth very slowly, until the signal strength bar turns green. This shows that you have found the signal.



Note: If you cannot find the signal, turn the dish back to the original azimuth setting. Then, loosen both elevation bolts just enough to be able to tilt the dish. Tilt the dish up by two degrees, and then tighten both bolts. Now, try turning the dish back and forth again. Repeat these steps, raising and lowering the elevation, until you find the satellite signal.

8. Once you have a signal, turn the dish assembly back and forth very slightly until the signal strength bar displays the strongest possible signal strength. Tighten the mast clamp bolts. Then, loosen the elevation bolts and adjust the elevation of the dish up and down slightly until the signal strength bar displays a strong signal. Do not adjust skew. Tighten all the bolts in the dish assembly so that the dish cannot be moved.
9. Once you have the strongest possible signal, press the CANCEL button on the remote to exit the **Point Dish/Signal** menu. The receiver displays an **Attention** message asking whether the installation is complete. If the answer is yes, select the **Yes** option. The receiver will begin taking a software upgrade. You will see a **Warning** that "Vital program information will now be downloaded into your receiver." You will also see a status bar showing the progress of this upgrade.

If the answer is no, you will need to repoint your dish following the preceding steps until the mounting and positioning is complete and you do have the “locked” indication.

10. Once the software upgrade is complete, you will see a message that your receiver’s memory is being upgraded.

While this message is displaying, the green power light on the receiver’s front panel will blink. Do not disturb the receiver while the green light is blinking.

This message may disappear, your screen may go blank for a few minutes, and the green light may continue to blink. This is normal and does not indicate a problem with the receiver.

11. When the software upgrade finishes, you need to return to the **Point Dish/Signal** screen. To do this, open the **Main Menu** and press 6-1-1 on the remote.
12. Select **Check Switch** from the **Point Dish/Signal** menu. When the **Check Switch** menu opens, select **Check**. The receiver will check your satellite system. After the system checks your installation, an **Installation Summary** screen will appear. Verify that the 500 Twin is displayed, and the 119 and 110 satellites are verified. Select **OK**.
13. At the **Point Dish/Signal** menu, select the **110 West** option and verify that you have a green signal strength bar with a locked signal.
 - If there is no signal strength on **110 West**, check your connections and select **Check Switch** again. If there is still no signal, confirm that your skew angle is correct, and start over with step #3.
 - If the signal from the **110 West** satellite is weak and you do not see a green signal strength bar, repeat step #7 to fine-tune the dish until you have about the same signal strength for both the **119 West** and **110 West** satellites.
14. Connect any other receivers in the system. Run **Check Switch** on any receivers that have not yet taken the software upgrade to make sure they have the latest software.

If you will be installing a multi-dish system, follow the instructions that begin below. If not, you can skip to the section that begins on page 90 titled *Grounding the System* for instructions on how to ground your system.

INSTALLING A LEGACY MULTIPLE DISH SYSTEM

Once you have installed the DISH 500 with its Legacy LNBFs, you can install a DISH 300 with a Legacy LNBF as follows (please see the section titled *Alternate Legacy Wiring Diagrams* for more information on wiring the system).

1. Turn on the television and receiver. You should see the **Point Dish/Signal** menu. If you do not, open the **Main Menu** and press 6-1-1 on the remote.

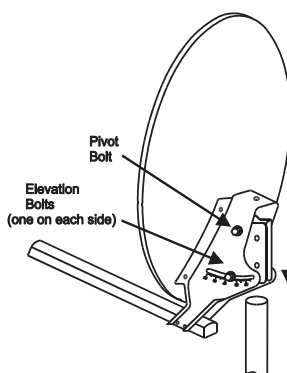
Installation Instructions

2. On the **Point Dish and Signal Strength** menu, use the Up/Down/Left/Right arrow buttons to move the highlight to the Satellite field and choose the satellite at which you would like to aim, for example **61.5**.
3. Enter your zip code in the **ZIP Code** field.
4. The receiver displays the azimuth and elevation angles on the menu. Write down these numbers as you will use them later in this procedure.

Azimuth:_____ **Elevation:**_____

5. Using these azimuth, and elevation angles, find a location for the satellite dish. Then, use the elevation angle to find out how high the satellite is in the sky from your location. Make sure nothing blocks the line of sight to the satellites.
6. Mount the satellite dish following the instructions that came with it. Connect the RG-6 cable directly from the LNBF to the **Satellite In** port on the receiver's back panel. Make sure there are no multi-dish switches between the LNBF and the receiver.
7. When the dish is mounted, you should still be on the **Point Dish/Signal** menu. If not, open the **Main Menu** and press 6-1-1 on the remote.
8. Look at the Signal Strength bar. Turn the dish back and forth very slowly, until the signal strength bar turns green. This shows that you have found the signal.

Note: If you cannot find the signal, turn the dish back to the original azimuth setting. Then, loosen both elevation bolts just enough to be able to tilt the dish.



Tilt the dish up by two degrees, and then tighten both bolts. Now, try turning the dish back and forth again. Repeat these steps, raising and lowering the elevation, until you find the satellite signal.

9. Once you have a signal, turn the dish assembly back and forth very slightly until the signal strength bar displays the strongest possible signal strength. Tighten the mast clamp bolts. Then, loosen the elevation bolts and adjust the elevation of the dish up and down slightly until the signal strength bar displays a strong signal. Tighten

all the bolts in the dish assembly so that the dish cannot be moved.

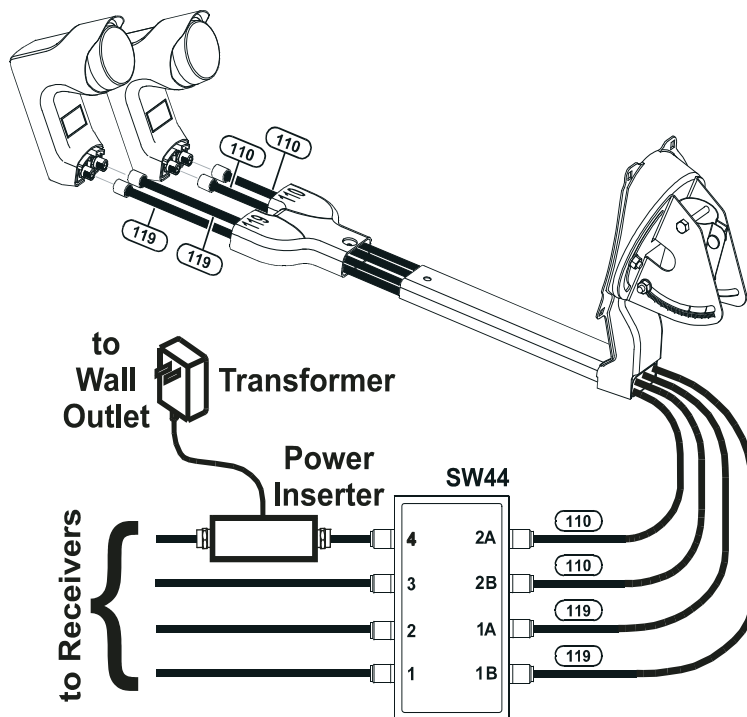
10. Mark the final locations on the mast and mounting bracket with a permanent marker. This assists you later if you have to realign the dish because of movement due to wind or weather. Do not scratch the painted surfaces to mark them. This will cause rusting.
11. Connect the LNBFs to the switch(es). (See the Alternate Wiring diagrams on page 84 for more information.)
12. Connect the switch(es) to the receiver.
13. Run **Check Switch** from the **Point Dish/Signal** menu. Verify that you have signals from all the satellites in your system and that the correct switches have been identified.

ALTERNATE LEGACY WIRING DIAGRAMS

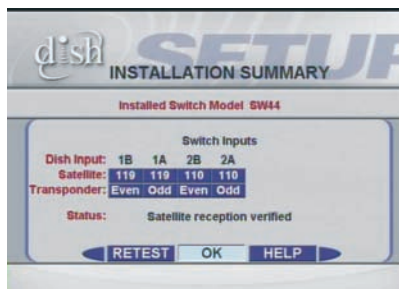
DISH 500, TWO DUAL-OUTPUT LNBFs AND ONE SW44 MULTI-DISH SWITCH, FOUR RECEIVERS



This diagram omits grounding for clarity. Make sure to ground the system per the National Electrical Code (NEC) and all local electrical codes. See *Grounding the System* for grounding procedures.



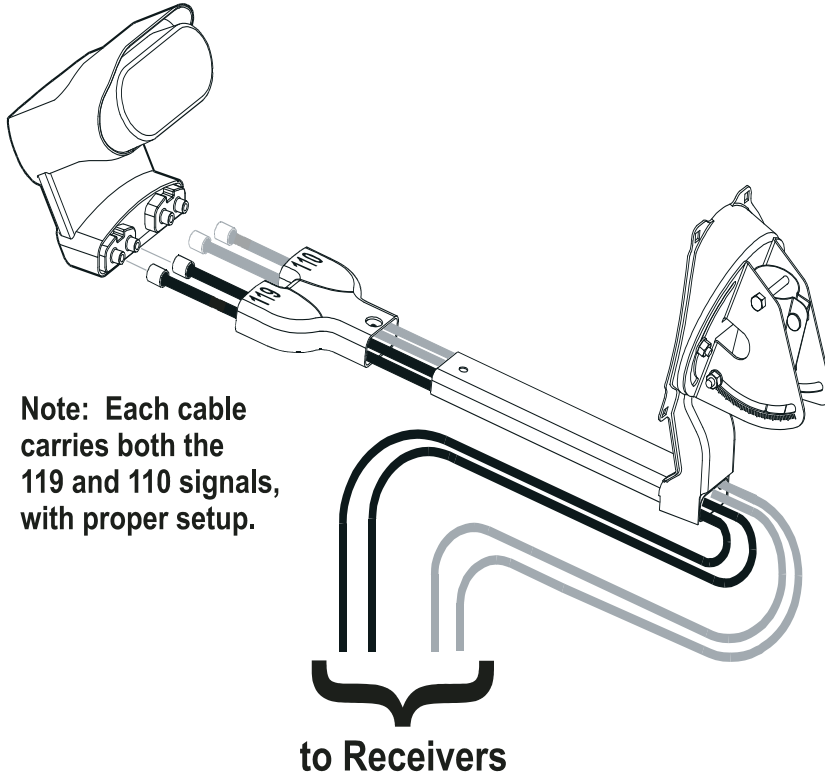
When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to the one shown below.



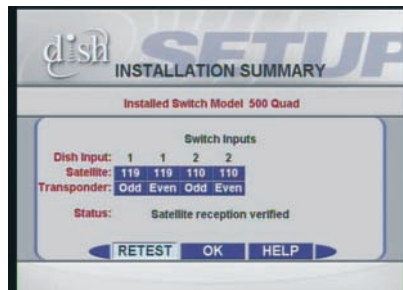
DISH 500, ONE QUAD LNBF, FOUR RECEIVERS



This diagram omits grounding for clarity. Make sure to ground the system per the National Electrical Code (NEC) and all local electrical codes. See *Grounding the System* for grounding procedures.

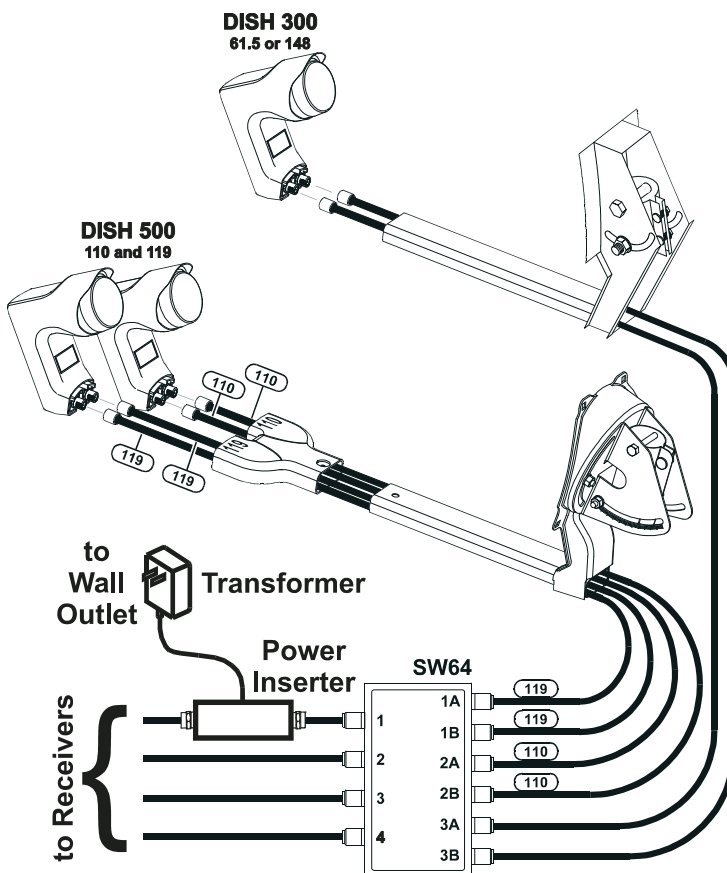


When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to the one shown below.

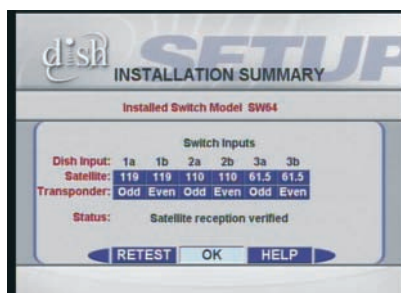


TWO DISHES, THREE DUAL-OUTPUT LNBs, ONE SW64 MULTI-DISH SWITCH, FOUR RECEIVERS

This diagram omits grounding for clarity. Make sure to ground the system per the National Electrical Code (NEC) and all local electrical codes. See *Grounding the System* for grounding procedures.



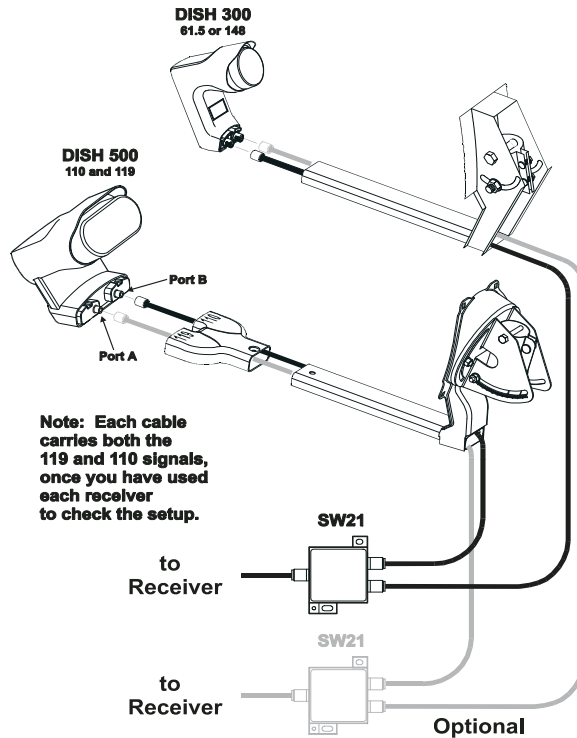
When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to the one shown below.



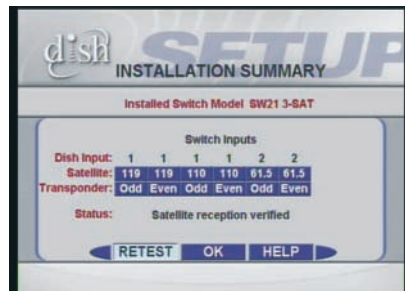
**TWO DISHES, ONE DUAL LNB, TWO RECEIVERS, TWO SW21
MULTI-DISH SWITCHES, TWO RECEIVERS**



This diagram omits grounding for clarity. Make sure to ground the system per the National Electrical Code (NEC) and all local electrical codes. See *Grounding the System* for grounding procedures.



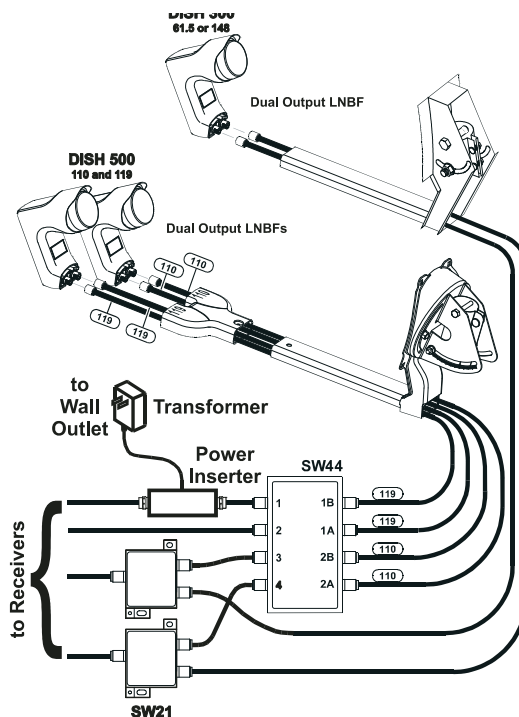
When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look like the one shown below.



TWO DISHES, THREE DUAL-OUTPUT LNBFs, ONE SW44 SWITCH, TWO SW21 SWITCHES, FOUR RECEIVERS

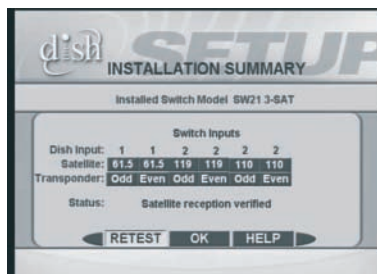


This diagram omits grounding for clarity. Make sure to ground the system per the National Electrical Code (NEC) and all local electrical codes. See *Grounding the System* for grounding procedures.



Note: In this installation, only two receivers will get signal from all three LNBFs. The other two receivers will get signal from only two LNBFs.

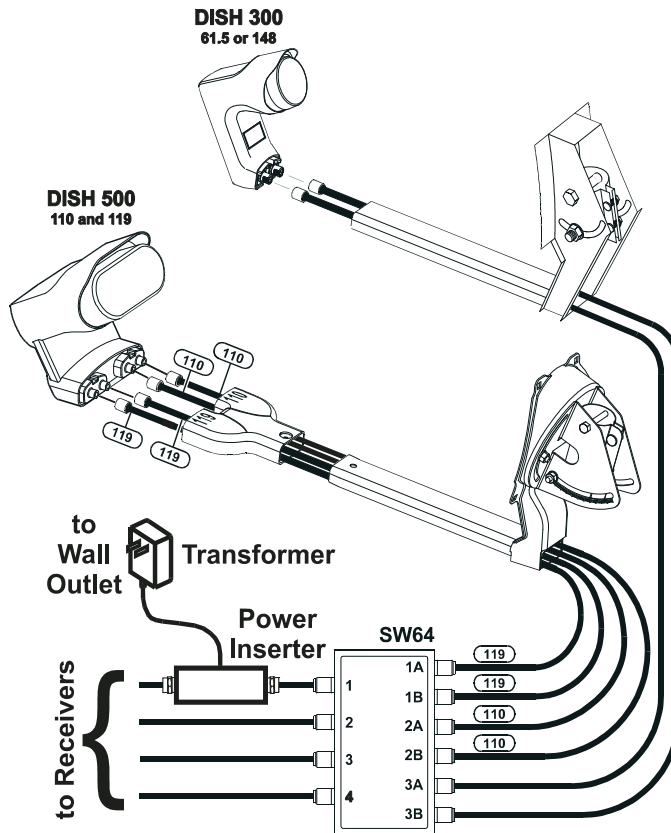
When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to the one shown below.



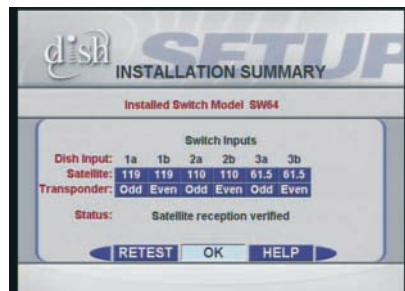
TWO DISHES, ONE QUAD LNBF, ONE DUAL-OUTPUT LNBF, ONE SW64 MULTI-DISH SWITCH, FOUR RECEIVERS



This diagram omits grounding for clarity. Make sure to ground the system per the National Electrical Code (NEC) and all local electrical codes. See *Grounding the System* for grounding procedures.



When you set up your system following this diagram and run **Check Switch** the **Installation Summary** screen should look similar to T the one shown below.



GROUNDING THE SYSTEM

After you have installed either the DishPro or Legacy system, you must ground the system, and then connect each receiver to a telephone line, following these instructions.

INSTALLING THE GROUND BLOCK

WARNING!

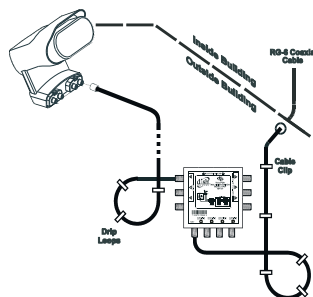


A properly grounded multi-dish switch can take the place of a ground block. The following instructions apply to a block or a switch.

You may want to install the ground block onto the side of the building, or on some other sturdy structure near the satellite dish. Make sure that the location is stable, and that you fasten the ground block tightly to the surface. As stated in Article 820-40 of the National Electrical Code (NEC), locate the ground block as close as possible to the power entry ground.

RUNNING THE COAXIAL CABLES TO THE GROUND BLOCK

1. Mount the ground block so that its connections are horizontal. This helps keep moisture from leaking into the block. Using the shortest path possible, run the coaxial cable(s) from the LNBF(s) to the input(s) on the ground block.
2. Put a drip loop in each cable to allow moisture to drip from the cable before it runs into the ground block.



FOR EXAMPLE ONLY

3. Run the ground wire to the power entry ground of the building in accordance with the National Electrical Code (NEC) and all local electrical codes.



A ground wire must always be a single piece of wire. Never splice two wires together for a ground. Corrosion and weathering can lead to a poor connection at the splice, making the ground ineffective and dangerous. If you cut the ground wire too short, replace it with a single wire cut to the correct length.

4. Use cable clips to attach the cable to the side of the building. This helps prevent damage.

RUNNING THE COAXIAL CABLE(S) TO THE RECEIVER(S)

1. Using the shortest path possible, run the coaxial cable(s) from the ground block to the satellite receiver(s). Do not kink or pinch any cable. Cables should be bent only in gentle curves.

WARNING!



Do not use a longer cable between the satellite dish and the LNB than is specified in the DishPro or Legacy system installation instructions. In the case of a Legacy system, you may have to install a line amplifier to boost the satellite signal. Otherwise, the system is more likely to lose the signal during periods of rain, snow, or heavy cloud cover. If your system requires more cable than the limit specified in these installation instructions, you should consider having the system professionally installed.

2. Put a drip loop in each cable at a point before it enters the building. A drip loop allows moisture to drip from the cable before it runs into the building.

WARNING!



Before drilling any holes in the wall or roof of your building, make sure that there are no wires or pipes in the area of the holes. If you are not comfortable doing this, contact a professional in your area. Make sure that you follow all safety instructions and building codes.

3. Locate each receiver inside the building, against or near an outside wall. Then drill a hole through the outer wall to pass a cable inside the building. If a receiver is located in an interior room, run a cable through the outside wall, and into an attic, basement, or crawl space in order to reach the receiver.
4. Seal all holes that you drill in the building with silicone or other weather-proof sealant after installation. Once each cable is inside the building, you may attach it to a wall receptacle or directly to a receiver.

WARNING!



Tighten the back panel coaxial cable connections only by hand. Using a wrench may over-tighten the connections, causing damage. Such damage is not covered by the Limited Warranty in the User Guide that came with the system.

CONNECTING EACH RECEIVER TO A TELEPHONE LINE

You must keep each receiver connected to an active telephone line. Otherwise, you may not be able to order pay per view programs. Run a telephone cable with a standard RJ-11 connector from each receiver's back panel **Phone Jack** to an active telephone connection.

Note: You may be able to use a wireless telephone extender. However, this may not support all the features of some receivers.

You must also set up each receiver for your telephone system (touchtone or rotary/pulse), and set a telephone number prefix, if you need a prefix to make an outside call.

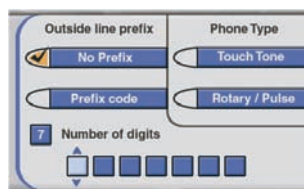
1. Display the **Installation and Setup** menu.
2. Select the **Telephone System** option to display the **Telephone System Setup** menu.



3. Select the **Touch Tone** or the **Rotary/Pulse** option in the **Phone Type** list.

Note: Usually, you need a telephone number prefix only for business installations. For most residential installations, all you need to do is set the telephone system type. The default setting of **No Prefix needed** will allow correct dialing. If this is the case, select the **Save** option to save the above setting, and stop here. If you do need to set a prefix, then instead of selecting the **Save** option, go on to step 4.

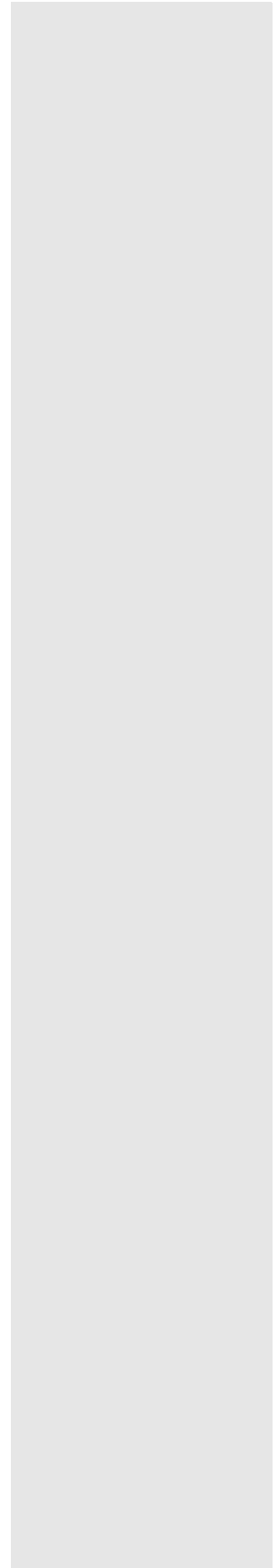
4. Move the highlight to the **One-digit code** or the **Two-digit code** option in the **Outside Line Prefix** list. Press the **Select** button to select the highlighted option.

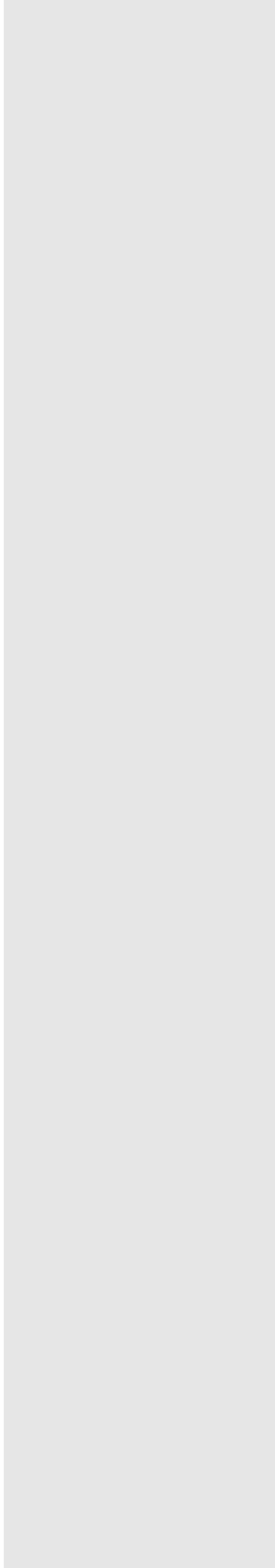


5. If you selected the **One-digit code** option, the receiver displays and highlights a box where you must enter the digit.

If you selected the **Two-digit code** option, the receiver displays two boxes (highlighting the top box) where you must enter the digits. To do this, do the following:

- a) Enter the first digit in the top box.
 - b) Move the highlight to the bottom box.
 - c) Enter the second digit in the bottom box.
6. Move the highlight to the **Save** option. Press the **Select** button to save the settings.





Notes

Chapter 5

Reference

TROUBLE-SHOOTING TABLES

Use these tables if you have problems using the system. Look in this section for a description of the problem before calling the Customer Service Center. Many problems arise from basic misunderstandings of how the system works, especially when you are just becoming familiar with it. These tables cover many problems, usually with a simple solution for each one. To solve a particular problem, do the following:

1. Review the section in this Guide that relates to the problem.

If you cannot find a solution, then find the section in the following tables that relates to the problem.

Look down the *What Is Happening* column until you find the problem.

For better understanding, read the information in the *Possible Reason* column.

Try each of the suggested solutions in the *What to Do* column.

For more information, call the Customer Service Center at 1-800-333-DISH (3474), or see www.dishnetwork.com.

Note: Before calling the Service Center, have ready the date of purchase and either your customer account number, the receiver conditional access number, or the receiver model number. Display the *Important System Information* menu to find these numbers (See *Ordering your Programming* on page 6). Also, write down any error messages that the receiver displays on the television screen.

ON-SCREEN MESSAGES

Note: This table describes some on-screen messages in the order of their message numbers. Just find the message number in the upper right-hand corner of the message, and then find the matching number in this table.

Message Number	Possible Reason	What to Do
001	There may be a problem with the multi-dish switch.	Check the coaxial cables and their connections to and from the multi-dish switch. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). If this does not work, call the Customer Service Center for help.
002	Heavy rain, snow, or cloud cover may be interfering with transmission of the satellite signal, or there may be other interference.	Note the local weather conditions. Remove any snow or other debris which may have collected on the satellite dish. Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Make sure that the satellite dish is aimed at the satellite. Check the strength of the signal using the Point Dish/Signal menu. Consult your installer to re-aim the dish, if necessary, to obtain the strongest possible signal.
003, 004	The wrong type of coaxial cable may be used in the system, or the cable run length may be too long. Or, there may be a problem with the multi-dish switch.	Make sure the system uses RG6 coaxial cable; if not, call your dealer or installer. Check the dish-to-receiver cable run length; if it is over 100 feet, call your dealer or installer. Check the coaxial cables and their connections to and from the multi-dish switch. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). If this does not work, do the Check Switch test.
005	The receiver may not yet have been electronically linked with the Smart Card, via the satellite signal. The satellite dish may have moved so that it is no longer picking up the satellite signal. The cable connections may have loosened or have moisture inside. There may be an interruption of the satellite signal.	If you have authorized the receiver, wait a few minutes to see if the message is removed. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Check that the Signal Strength bar in the Point Dish/Signal menu is green and displays the word Locked . If not, contact your installer to re-aim the satellite dish. If you have not authorized the receiver, call the Customer Service Center for help.
006	The receiver may not be connected to an active telephone line. The Smart Card credit limit may have been suspended.	You must connect the receiver to an active telephone connection at all times. If you install two or more receivers, you must connect each receiver to an active telephone connection at all times. Review your pay per view purchases to check the Smart Card credit limit.
008	Maybe the receiver is connected to a DSL (Digital Subscriber Line) phone line.	Install a DSL filter between the receiver and the telephone wall jack.
011, 012	Viewers in specific areas are prohibited from watching certain programs. For example, viewers who live close to a particular football stadium may be prohibited from watching football games that are played in that stadium.	Remember that the program providers specify which programs are “blackout” for which viewers, not DISH Network SM .
013, 014	You may have tried to tune to a program on a channel which you have not bought.	You must buy a channel before you can tune to a program on that channel. Call the Customer Service Center to buy the channel, or if you believe this message was displayed by mistake.

015	You may have just plugged in the receiver, and it is acquiring the satellite signal. Or, the receiver may have temporarily lost the signal.	Wait a few minutes to see if the message is removed. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Check that the Signal Strength bar in the Point Dish/Signal menu is green and displays the word Locked . If not, contact your installer to re-aim the satellite dish.
018	The receiver may not be connected to an active telephone line. The Smart Card credit limit may have been exceeded.	You must connect the receiver to an active telephone connection at all times. If you install two or more receivers, you must connect each receiver to an active telephone connection at all times. Review your pay per view purchases to check the Smart Card credit limit. Call the Customer Service Center for help checking the credit limit, and/or to get authorization to make a purchase.
019	The Smart Card may be inserted up side down or backwards.	Check that the Smart Card is inserted right side up, with the picture on top and the arrow facing into the receiver front panel slot.
020	The receiver will work only with the Smart Card that was inserted in the receiver when the Customer Service Center authorized the receiver.	Insert the proper Smart Card into the receiver front panel slot. Call the Customer Service Center for help.
021	The Smart Card may be missing or may not be inserted correctly.	Check that the Smart Card is fully inserted into the receiver front panel slot.
022	The receiver may not yet have been electronically linked with the Smart Card, via the satellite signal. The satellite dish may have moved so that it is no longer picking up the satellite signal. The cable connections may have loosened or have moisture inside. There may be an interruption of the satellite signal.	If you have authorized the receiver, wait a few minutes to see if the message is removed. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Check that the Signal Strength bar in the Point Dish/Signal menu is green and displays the word Locked . If not, contact your installer to re-aim the satellite dish. If you have not authorized the receiver, call the Customer Service Center for help.
026	The receiver may have temporarily lost the satellite signal.	Wait a few minutes to see if the message is removed. Make sure that all required cables are in place, and check that all cable connections are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Check that the Signal Strength bar in the Point Dish/Signal menu is green and displays the word Locked . If not, contact your installer to re-aim the satellite dish.
028	The receiver may need to get new software before you can use it to order pay per view programs.	Turn the receiver off. Doing this allows the receiver to “download” new software via the satellite signal. The download may take several minutes; do not disturb or unplug the receiver during this time. When the download is done, you will be able to use it to order pay per view programs.
032	You may have tried to set a VCR Event Timer without having set up the receiver to control the VCR.	You must set up the receiver to control the VCR before you can set a VCR Event Timer.
059	You may have tried to close an installation menu without having done the Check Switch test.	If your setup includes a multi-dish switch, you must do the Check Switch test.
060	You may have aimed the satellite dish at one satellite, but selected the option for another satellite on the Point Dish/Signal menu.	Make sure that you have selected the option for the right satellite on the Point Dish/Signal menu. Make sure that the cable(s) for the satellite you have selected are connected to the LNBF that receives signals from that satellite. Re-aim the satellite dish at the right satellite.

061	You may have set up the receiver to accept a transmission (a “download”) of the latest operating software via the satellite signal.	It is very important for the receiver to get the latest operating software, so let the receiver do so. The “download” may take several minutes. Do not disturb or unplug the receiver during this time.
074	The receiver gives you three chances to enter the correct password. If you fail to do so, the receiver “times out” and will not allow you to try again for several minutes.	Wait a few minutes and then try again to enter the password. Note: The “time out” feature is designed to prevent someone from trying password after password until he or she happens to guess the right one and so gains unauthorized access to the receiver.
078, 079, 080	You may not have connected the receiver to an active telephone line. Or, the telephone line may be defective. Maybe the receiver is connected to a DSL (Digital Subscriber Line) phone line.	Connect the receiver to an active telephone line. Make sure that the telephone line to which you connect the receiver is working properly. Note: To be able to order pay per view programs, you <i>must</i> keep the receiver connected to an active telephone line at all times. If your setup includes more than one receiver, this applies to <i>each</i> receiver. The receiver uses the telephone line to make toll-free calls, usually in the middle of the night, to send information to the Customer Service Center. Install a DSL filter between the receiver and the telephone wall jack.
093	You may have set up the receiver to reset itself back to the “factory defaults,” that is, the settings it had when it was shipped from the factory.	If you want to reset the receiver to its factory default settings, select the Yes option. If not, select the No option.

USING THE REMOTE CONTROL

What Is Happening	Possible Reason	What to Do
You cannot find the remote control.	N/A	Use the receiver front panel Control Buttons to control the receiver until you find the remote. If the remote control is permanently lost or too damaged to use, call the Service Center to order a replacement.
When you press a button on the remote control, the receiver does not do what you expect.	The remote control may be missing batteries, the batteries may be incorrectly placed in the remote, or the batteries may be weak or dead.	If the batteries are missing or dead, insert fresh AAA-size batteries. If the remote has fresh batteries, check whether they are placed according to the label diagram. If not, remove them and place correctly.
When you press the remote control Power button to turn the receiver ON, the receiver front panel Power light does not light up.	You may not be able to see that the receiver Power light is on, if other lights in the room are too bright. The remote control may not be operating properly or the batteries may be weak or dead. The receiver power cord may not be plugged into a power outlet, or there may be a problem with the power.	Try other remote control buttons to see if the receiver is responding. Replace the remote batteries with fresh ones. Check that the receiver power cord is not damaged, and that the plug is inserted correctly into the outlet.
You use a pyramid type IR extender (not a “mouse tail”), and it does not seem to work.	The IR sensor on the extender that receives the remote control signals may not be facing the remote control. The IR cable on the extender that sends the signal to the receiver may not be right in front of the IR sensor on the receiver front panel.	Make sure that the extender that receives the signal from the remote control is facing the right way, so that the IR sensor can receive the remote control signals. Make sure that the IR cable on the extender that sends the signal to the receiver is right in front of the IR sensor on the receiver front panel, so that the receiver IR sensor can receive the signals. If doing the above does not solve the problem, contact the manufacturer of the extenders for assistance.

HEARING A PROGRAM

What Is Happening	Possible Reason	What to Do
The receiver front panel Power light is on and there is a good picture on the TV set, but you do not hear any sound.	You may have muted the sound, or set the volume so low that you cannot hear it. The audio connections may not be properly connected.	Check the volume level on the TV or audio device. Turn off the mute or turn up the volume, as required. Check the audio connectors and cables from the receiver to the TV or the sound system. Check the TV speakers or the sound system.
You hear a foreign language with a program.	You may have set the receiver to select an alternate audio language.	Use the Alternate Audio Language menu to select the language that you prefer.

WATCHING A PROGRAM

What Is Happening	Possible Reason	What to Do
The receiver front panel Power light is on, but the TV image: is black (no picture), is frozen, has breakups, has "snow," or shows small squares of various colors.	The TV set may not be working properly. If the TV and the receiver are working properly, there may be interference with the satellite signal. The TV may be wired to the wrong input.	Make sure that the TV set is plugged into an electrical outlet. Make sure the outlet has electrical power. Make sure that the TV is turned on. If the receiver is connected to the TV using only the RF or VHF connections, make sure that the TV is tuned to channel 3 or 4 (whichever works best in your area) and that the receiver back panel Channel 3/4 Switch is set to the same channel as the TV. Make sure that the TV brightness and contrast are adjusted correctly. Make sure that the TV is connected properly to the receiver. Make sure that the TV's text mode and closed captioned features are turned off. Set the TV to SVIDEO or VIDEO input. Check that the system has been installed correctly. Make sure that all required coaxial cables are in place, and check that all cable connectors are tight and dry (for outdoor cables). Make sure that the satellite dish has a clear line of sight to the satellite. Check whether branches or leaves have grown into the line of sight. Make sure that the satellite dish is aimed at the satellite. Check the strength of the signal using the Point Dish and Signal Strength menu. Consult your installer to re-aim the dish, if necessary, to obtain the maximum possible signal strength. Note the local weather conditions. Heavy rain, snow, or cloud cover may be interfering with transmission of the satellite signal. Remove any snow or other debris which may have collected on the satellite dish.
The receiver front panel Power light is on, and there is a picture on the TV screen, but the picture: has sparkles or is grainy, has a herringbone pattern, lacks color or vertical hold, or wobbles, or looks "washed out" or fuzzy.	The TV set may not be working properly. If the receiver is connected to the TV using only the RF or VHF connections, there may be a strong local broadcast on the same channel, or a channel adjacent to the one to which the TV is tuned. There may be interference from other nearby electrical devices (such as cellular telephones, computers, microwave ovens, radios, stereos, or TVs).	Make sure that the TV brightness and contrast are adjusted correctly, and that the TV is working properly. Make sure that the TV is connected properly to the receiver. Check other nearby electrical devices as possible sources of interference. Check that all required coaxial cables are in place. Check for moisture or water leaking into all connections. Dry them out if needed, then seal them with coaxial cable sealant. Check the dish-to-receiver cable run length; if it is over 100 feet, call your dealer or installer.
A "black box" fills almost all of the TV screen.	You may have turned on the Closed Captioned feature on the TV, and put that feature into Text mode.	Using the TV remote control and/or menus displayed by the TV (not the receiver remote control or the menus displayed by the receiver), turn off the closed captioned feature.
The TV screen is all blue.	You may have connected the receiver to an input on the TV that is incorrect for the signal output from the receiver.	Check your TV owner's manual for the correct TV input to use for the signal output from the receiver.

USING THE MENUS

What Is Happening	Possible Reason	What to Do
You were using a menu, and it suddenly closed.	The receiver has a time-out feature that closes any menu after several minutes of no activity. This will discard any changes you have made, but otherwise does no harm to the receiver.	Start over again.

USING THE PROGRAM GUIDE OR THE BROWSE BANNER

What Is Happening	Possible Reason	What to Do
In the Program Guide , some channels have a red background.	Red means that you have not bought the program. You must buy a channel before you can tune the receiver to it.	If you want to buy a channel, call the Customer Service Center.
You try to display future programs in the Program Guide or Browse Banner , but find you cannot.	The Program Guide and Browse Banner can display programs scheduled for an extended, but not unlimited time beyond the present.	Try displaying the Program Guide again later. By that time, it may show programs for the time and date you want.
You try to display programs that have ended in the Program Guide or Browse Banner , but find you cannot.	The Program Guide and Browse Banner can display <i>only</i> programs that have not yet ended. These features cannot display a time earlier than the present.	Contact the program providers for details on past programs.
When you are using the Program Guide or Browse Banner , some channels are missing.	You may have applied a Favorite List other than the list named All Chan . You may have set up the Program Guide so that when the receiver is locked, the Guide hides adult channels. If your setup includes a multi-dish switch, you may need to do the Check Switch procedure.	You can change the applied Favorite List while using the Program Guide , by pressing the remote control Guide button. You can choose another custom Favorite List, the All Chan list, which includes all the channels, or the All Sub list, which includes all subscribed channels. Unlock the receiver for the Program Guide to display adult channels. Do the Check Switch procedure (see the installation instructions for details).

CHANGING CHANNELS

What Is Happening	Possible Reason	What to Do
You enter a desired channel number. The channel changes, but the new channel is not exactly the channel you entered. You are scanning up or down through the channels, and the receiver is skipping channels that you know you have bought.	You may have made a mistake entering the channel number, or the channel number you entered may be invalid. If so, the channel displayed is the closest possible to the channel you entered. If you entered the number for a channel that you have not bought, the receiver will change to the channel and allow you to buy the channel or display a message. If a Favorite List other than All Chan is applied, the receiver will skip channels that are not on the applied list. If you have set up the Program Guide to hide adult channels and the receiver is locked, the receiver will skip such channels.	Carefully retry entering the channel number you want. Press the remote control Recall button to return to the previous channel number. Select All Chan as the active Favorite List. Unlock the receiver so that it does not skip adult channels. If you want to buy a channel, call the Customer Service Center.

USING FAVORITE LISTS

What Is Happening	Possible Reason	What to Do
You press the remote Guide button while the Program Guide is displayed. You find that you can apply only the All Chan list or the All Sub list.	If you have not added channels to any custom Favorite List, you will be able to apply only the All Chan list or the All Sub list.	You must add channels to a custom Favorite List before you can apply it.
You try to change the All Chan list or the All Sub list. The receiver displays an ERROR message.	The receiver will not allow you to change the All Chan list or the All Sub list.	Choose another list to change. Note: You can change the All Sub list by changing what channels you buy.
You try to apply an empty Favorite List. The receiver displays an ERROR message.	The receiver will not allow you to apply an empty list.	Choose another list to apply, or add at least one channel to the empty list.
A Favorite List does not show channels that you know you have added to it.	If you have set up the Program Guide to hide adult channels and the receiver is locked, the Favorite List will not show such channels.	Unlock the receiver for the list to show adult channels.

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USING LOCKS

What Is Happening	Possible Reason	What to Do
You set a lock (for example, a lock on programs by ratings), but the lock does not take effect.	You may not have locked the receiver.	You must lock the receiver to apply any lock that you have set.
You forgot the password, so that you are unable to unlock the receiver.	You may not have written down the password, to keep it in a safe place.	Call the Customer Service Center. You must provide the following information: (1) your name; (2) your address; (3) your telephone number; (4) the receiver serial identification number; and (5) your Personal Identification Number (PIN), if you use one.

BUYING A PAY PER VIEW PROGRAM

What Is Happening	Possible Reason	What to Do
Someone orders a pay per view program without your permission.	You may have been away from the receiver, and someone else used it.	Lock the purchase of pay per view programs. Remember that you are responsible for all pay per view purchases, whether or not you authorize such purchases. If you lock pay per view purchases, then anyone who wants to order a pay per view program must enter the password.
You find that you are not able to order a pay per view program.	The receiver may not be connected to an active telephone line. The Smart Card credit limit may have been exceeded.	You must connect the receiver to an active telephone connection at all times. If you install two or more receivers, you must connect each receiver to an active telephone connection at all times. Review your pay per view purchases to check the Smart Card credit limit.
You find that you are not able to cancel a pay per view program.	You ordered a pay per view program, and then decided not to watch it.	You cannot cancel an order for a pay per view program, whether it was just ordered or ordered earlier.
Your setup includes more than one receiver. You order a pay per view program, but it does not appear via all of the receivers.	You ordered a pay per view program, and want it to be available via all the receivers in your setup.	If you want to watch a pay per view program on TVs connected to up to six receivers, you must order the program for each receiver but you only pay for the program once.

USING THE TELEPHONE FOR VOICE/DATA/FAX

What Is Happening	Possible Reason	What to Do
While you are making a telephone call, you hear "clicks."	The receiver may have tried to call the Customer Service Center to send pay per view purchase information. When the receiver found that the telephone was busy, it automatically disconnected.	You do not have to do anything. You can always use your telephone line, because the receiver automatically hangs up if it finds the line is busy.
The receiver cannot connect to the DISH Network.	Maybe the receiver is connected to a DSL (Digital Subscriber Line) phone line.	Install a DSL filter between the receiver and the telephone wall jack.
You pick up the telephone to make a call, but you do not hear a dial tone.	The receiver was calling the Customer Service Center to send pay per view information. When the receiver found that the telephone was busy, it automatically disconnected.	Hang up, and then pick up the telephone again to get a dial tone.

Your computer or facsimile (FAX) machine tries to send a FAX or modem transmission, but fails.	The receiver was calling the Customer Service Center to send pay per view information. When the receiver found that the telephone was busy, it automatically disconnected. The FAX or modem found that there was no dial tone, and cancelled the transmission.	Resend the FAX or modem transmission.
Your computer or FAX machine was receiving a FAX or modem transmission, but an error occurred.	The receiver may have tried to call the Customer Service Center to send pay per view purchase information during the FAX or mode call. When the receiver found that the telephone was busy, it automatically disconnected. This generated "clicks" that caused an error in the FAX or modem transmission.	Have the sender resend the FAX or modem transmission.

USING EVENT TIMERS

What Is Happening	Possible Reason	What to Do
You try to set up an event timer and the receiver displays a message noting that the program is locked.	You must enter the password before you can create an event timer for a locked program.	To be able to set up an event timer for the program, first enter the password.
You try to set up an event timer and the receiver displays a message noting that the program is a pay per view event.	You must order a pay per view event before you can create an event timer for it.	To be able to set up an event timer for the event, first order it.
You try to set up an event timer, but the receiver displays an Error message giving you the option to delete an event timer that was set up earlier.	You already have set up the maximum number of event timers.	To be able to set up a new event timer, delete one of the event timers you set up earlier.
You set up an event timer, but the receiver does not tune to the channel of the program, or does not record the program.	You may have set up a Reminder Event Timer but what you should have set up is an Auto-Tune Event Timer, a VCR Event Timer, or a PTV Event Timer.	Remember that a Reminder Event Timer just reminds you that the program is about to start. An Auto-Tune Event Timer reminds you and tunes the receiver to the channel of the program. A VCR Event Timer reminds you, tunes the receiver, and starts the VCR. A PTV Event Timer reminds you, tunes the receiver, and starts the hard disk. A PTV Event Timer can operate only if the receiver memory has enough space. See the Using Personal TV table for help.
You set up an event timer for a program that is repeated (such as a regularly scheduled program), but the timer does not operate for a showing of the program.	You may have set up a timer with an incorrect frequency.	Remember that a Once event timer operates just one time. A Mon.-Fri. event timer operates Monday through Friday on the same channel at the same time. A Daily event timer does the same, Monday through Sunday. A Weekly event timer operates once a week on the same channel at the same time.
You set up an event timer, but the timer does not operate at all.	The program time may have changed so that the event timer overlapped another event timer. The program time may have changed by more than twenty-four hours.	If the receiver is ON and finds an event timer overlap, it will display the Event Timer Scheduling Conflict menu. You must edit or delete one of the overlapping event timers. No event timer will operate if the program time changes by more than twenty-four hours.
You set up a Once event timer, but the timer operates at a time different from what you expect.	The program time changed.	A Once event timer always operates at the actual time of the program.
You stop the operation of an event timer for one showing of a program that is repeated (such as a regularly scheduled program), but the timer operates for the next showing.	Stopping the event timer applies only to the current showing of the program.	To stop all operations of a repeated event timer, you must delete the event timer. Note: The receiver deletes a Once event timer when it operates.
You are testing a VCR code to see if the receiver controls a VCR. The VCR does not do the test.	The VCR may not be turned ON, there may not be a tape inserted, the tape may not be rewound, or the write-protect tab on the tape may have been removed. The code you are testing may not be valid for the VCR.	Make sure the VCR is turned ON, with a blank tape inserted on which you want to record, that the tape is rewound, and that the write-protect tab on the tape is intact. Try another VCR code from the VCR Code table. The remote control user guide provides this table.

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You set up a VCR Event Timer, but the VCR does not record the program you want.	You may not have turned the VCR ON, inserted a tape, or rewound the tape. Or, the write-protect tab on the tape may have been removed. If you use the receiver back panel RF or VHF connections in the wiring setup, you may not have set the receiver channel 3/4 setting and both the VCR modulator output and viewing channel to either 3 or 4. There may be obstacles between the receiver and the VCR. If you set up the VCR Event Timer using the Create an Event Timer menu, you may have selected an Auto-Tune, Reminder, instead of a VCR timer. If you did select a VCR timer, you may have selected an inappropriate timer frequency. If you set up the VCR Event Timer using the quick record feature, the timer was one-time only, and may have missed another showing of the program.	Make sure the VCR is turned ON, with a tape inserted on which you want to record, that the tape is rewound, and that the write-protect tab on the tape is intact. If you use the RF or VHF connections, you must set the receiver channel 3/4 setting and both the VCR modulator output and viewing channel to either 3 or 4. Remove any obstacles between the receiver and the VCR. When you set up a VCR Event Timer, make sure to select the VCR option in the Timer Type list on the Create an Event Timer menu. Also, make sure to select the proper option in the Timer Frequency list on this menu. Remember that you can set up only a Once (one-time only) timer using the quick record feature.
You edit an automatic event timer. The timer does not start or does not end according to the program for which you set the timer.	Editing an automatic event timer converts it to a manual event timer. Such a timer starts and stops at the times you specify, not the start and stop times of any specific program.	If you want an automatic event timer to start and stop according to a specific program, avoid editing that event timer.
You try to set up a manual event timer. The receiver displays an Error message.	You may have tried to set a manual event timer with invalid start or stop times.	Review the rules on start and stop times for manual event timers.
The receiver does not display the program name for a manual event timer.	The receiver may not be able to display a program name for a manual event timer.	Use the Program Guide or a printed schedule to find the program name.
You set an event timer. The event timer misses the beginning or the end of a program.	The program may have started a little earlier than scheduled, or it may have run over its scheduled ending time.	Use the Start 1 min. early option to start any event timer one minute early, except for a pay per view event. Use a manual event timer to start any event timer at the times you set yourself, except for a pay per view event.

DEVICE CODES

These tables contain the manufacturer codes for programming the remote to control your TV, a VCR, DVD player, or audio amplifier. Every attempt has been made to include all codes. If your device brand is not listed or if the codes do not work, the remote may not control your device. In some cases codes may operate some but not all buttons shown in this guide.

TV Codes. Programming in

AUX mode: In most cases use these codes to program in TV mode; however, if programming in AUX mode, press 0 before entering the TV code. **VCR CODES**

TV	Codes
A Mark	670
Action	662
Admiral	521, 605, 668, 669, 675
Aiko	727
Aiwa	751
Akai	570, 573, 659, 660,
A-Mark	620
Amtron	657
Anam National	509, 541, 620, 651, 657, 661, 663, 698
AOC	505, 506, 519, 520, 573, 620, 627, 652, 653, 654, 659, 664, 665, 670, 672
Apex	743, 744, 745
Archer	620
Audiovox	620, 657, 662, 672
Bell & Howell	590, 669, 675
Broksonic	752, 659, 661, 748
Capehart	519, 627
Citizen	506, 516, 523, 524, 525, 526, 590, 652, 654, 657, 658, 680, 727
Classic	659
Colortyme	573, 627, 652, 654, 660, 667, 668, 671, 674, 679

TV	Codes
Contec/Cony	541, 655, 657, 661, 662, 726
Craig	536, 541, 657, 661, 662, 666, 667, 694
Crown	526, 536, 657, 666, 670
Curtis Mathes	506, 516, 526, 573, 590, 641, 645, 650, 652, 654, 658, 659, 660, 664, 665, 667, 668, 670, 674, 680, 703, 708
Daewoo	505, 524, 526, 529, 530, 531, 573, 652, 653, 654, 658, 659, 663, 664, 665, 670, 672, 674, 684, 698, 719, 727
Daytron	526, 627, 652, 654, 658, 665, 670, 672
Dimensia	645, 650
DISH Network	742
Dixi	566, 620
Dumont	501, 627, 652
Echostar	722
Electrohome	526, 573, 651, 652, 654, 656, 659, 660, 665, 670, 709, 728
Emerson	526, 534, 536, 541, 573, 590, 627, 636, 642, 648, 652, 654, 655, 657, 658, 659, 660, 661, 662, 665, 666, 667, 669, 670, 677, 679, 682, 692, 696, 699, 720
Envision	506, 573, 652, 654, 660, 664
Fisher	542, 590, 683
Fujitsu	534, 682, 694
Funai	534, 541, 657, 661, 662, 677, 682, 694
GE	508, 509, 543, 544, 630, 645, 646, 650, 651, 652, 654, 659, 661, 663, 665, 667, 668, 670, 673, 676, 690, 691, 698, 701, 715, 716, 725, 728, 742

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TV	Codes
Goldstar	505, 523, 526, 545, 546, 566, 573, 652, 653, 654, 655, 656, 658, 659, 660, 664, 665, 670, 671, 693, 730, 747
Gradiente	660, 671
Granada	627, 670, 671
Grundig	670, 673
Hallmark	627, 652, 654, 659
Harmon/Kardon	561, 659
Hinari	534
Hitachi	523, 526, 548, 549, 553, 554, 555, 585, 597, 626, 636, 638, 643, 648, 652, 654, 655, 665, 668, 669, 670, 672, 673, 702, 718, 726
Infinity	566, 671
JBL	566, 671
JC Penney	505, 506, 516, 525, 526, 543, 546, 631, 645, 646, 650, 652, 653, 654, 658, 659, 664, 667, 668, 670, 673, 676, 678, 680, 690, 691, 701, 725, 726, 728, 730
Jensen	556, 573, 652, 654, 660
JVC	508, 557, 559, 642, 649, 655, 667, 673, 676, 726, 735, 736, 737
Kawasho	548, 561, 573, 652, 654, 664
Kenwood	506, 573, 652, 654, 656, 659, 660, 664, 679
Kloss Nova-beam	657, 663, 698, 723, 724
Konka	753
KTV	526, 541, 573, 657, 658, 661, 662, 664, 665, 670, 696
Lloyds	627, 679
Loewe	566
Logik	675
Luxman	523, 652, 654

TV	Codes
LXI	563, 566, 590, 595, 667, 631, 635, 645, 646, 650, 654, 659, 668, 683, 691, 701, 725
Magnasonic	573, 659, 660, 669, 672, 677
Magnavox	506, 520, 525, 536, 566, 567, 568, 573, 610, 652, 654, 656, 659, 660, 664, 665, 666, 669, 671, 673, 674, 677, 723, 724, 729
Majestic	675
Marantz	506, 566, 573, 652, 654, 660, 664, 665, 671
Megatron	627, 654
Memorex	590, 627, 653, 654, 659, 675, 720
MGA	504, 505, 506, 542, 571, 573, 627, 652, 653, 654, 656, 660, 728
Mitsubishi	504, 505, 542, 570, 571, 572, 573, 597, 623, 627, 652, 653, 654, 656, 659, 660, 664, 665, 670, 671, 705, 728
Montgomery Ward	675
Motorola	521, 605, 651
MTC	505, 506, 516, 523, 573, 627, 652, 653, 654, 659, 664, 667, 672, 680
Multitech	657
NAD	502, 617, 627, 631, 635, 637, 654
National	509
NEC	505, 506, 507, 517, 523, 573, 627, 651, 652, 653, 654, 660, 664, 665, 679, 731, 732
Nikkai	612
Nikko	654, 672, 727
Onwa	541, 657, 661
Optimus	637

TV	Codes
Optonica	521, 605, 607
Orion	694
Osaki	612
Panasonic	508, 509, 512, 566, 644, 651, 662, 663, 668, 672, 673, 676, 685, 689, 698, 700, 716, 234, 247
Philco	505, 506, 525, 536, 568, 573, 610, 651, 652, 653, 654, 655, 656, 659, 660, 664, 665, 666, 669, 671, 672, 674, 677, 723, 724, 729
Philips	525, 566, 651, 652, 655, 656, 671, 690, 723, 724, 729
Pioneer	502, 548, 576, 636, 637, 648, 652, 654, 663, 665, 708
Portland	505, 526, 573, 652, 654, 658, 659, 664, 665, 670, 727
Price Club	680
Prism	676
Proscan	645, 646, 650, 668, 691, 725, 742
Proton	513, 519, 526, 536, 585, 627, 652, 654, 655, 659, 660, 665, 666, 668, 670
Quasar	508, 509, 651, 663, 673, 676, 698, 700, 747
Radio Shack	526, 541, 607, 612, 645, 661, 662, 663, 668, 670, 698
Radio Shack/ Realistic	590, 607, 650, 652, 654, 655, 657, 658, 683, 730
RCA	503, 505, 548, 630, 633, 634, 636, 641, 645, 646, 648, 650, 651, 652, 653, 654, 656, 661, 663, 665, 667, 668, 670, 691, 698, 701, 708, 715, 716, 725, 742, 749
Realistic	590, 645
Runco	501

TV	Codes
Sampo	506, 519, 652, 654, 658, 663, 664, 665, 698, 730, 746
Samsung	505, 506, 516, 523, 526, 566, 573, 612, 627, 647, 652, 653, 654, 655, 656, 658, 659, 664, 665, 667, 669, 670, 679, 680, 704, 717, 730, 738
Sansui	754
Sanyo	542, 590, 652, 683
SBR	566
Schneider	566
Scott	526, 534, 541, 600, 652, 654, 655, 657, 661, 662, 665, 670, 677, 682, 696, 701
Sears	523, 534, 542, 563, 590, 595, 601, 604, 617, 627, 631, 635, 645, 646, 650, 652, 654, 656, 659, 661, 668, 670, 682, 683, 688, 691, 703, 725, 726
Sharp	521, 526, 585, 605, 607, 628, 629, 652, 654, 655, 658, 669, 670, 674, 679, 739, 740, 741
Signature	675
Solavox	612
Sony	500, 578, 640, 670, 690
Soundesign	525, 536, 541, 627, 652, 654, 657, 659, 661, 665, 666, 682
Starlite	657
Supra	523
Sylvania	506, 525, 536, 566, 568, 569, 573, 600, 610, 652, 654, 656, 659, 660, 664, 665, 666, 671, 672, 674, 677, 723, 724, 729, 733
Symphonic	632, 657, 662, 677, 692, 694
Tandy	521, 605
Tatung	509, 651, 663, 698
Technics	508, 673, 676

Chapter 5

Reference

TV	Codes
Techwood	523, 573, 652, 654, 660, 676
Teknika	504, 505, 512, 516, 523, 524, 525, 526, 534, 536, 541, 573, 644, 652, 653, 654, 655, 657, 658, 661, 662, 664, 665, 666, 670, 672, 675, 680, 682, 685, 726, 727
Telefunken	679
Toshiba	516, 590, 617, 631, 635, 667, 680, 683, 688, 750
Totevision	526, 658, 668
Ultra	672
Universal	543, 690
Vector, Research	506
Video Concepts	570, 661
Wards	536, 573, 607, 645, 650, 652, 653, 654, 656, 659, 664, 665, 666, 667, 668, 669, 674, 675, 677, 682, 690, 715, 723, 724, 729
White, Westinghouse	659, 664, 670, 672, 674
Yamaha	505, 506, 573, 652, 653, 654, 656, 664, 666, 672, 679

Programming in AUX mode: In most cases use these codes to program in VCR mode; however, if programming in AUX mode, press 1 before entering the VCR code.

VCR	CODES
Aiwa	588, 622, 623
Akai	513, 514, 515, 516, 517, 518, 520, 568, 682
Alba	546
Amstrad	588
ASA	556
Audiovox	676
Bell & Howell	581
Broksonic	559, 748

VCR	CODES
Bush	589
Calix	676
Canon	554, 678, 679
Capehart	546
CCE	681
Citizen	534, 591, 592, 594, 675, 676, 677
Colortyme	592,
Craig	591, 658, 675, 676, 681, 685
Curtis Mathes	554, 592, 594, 605, 607, 675, 677, 678, 679, 683
Daewoo	506, 534, 546, 547, 559, 588
Daytron	546
Denon	686
Dimensia	607
Dumont	549
Electrohome	512, 676
Emerson	505, 506, 508, 509, 511, 512, 534, 559, 568, 588, 590, 618, 676, 678
Finlandia	549
Finlux	549, 556, 588
Fisher	548, 549, 581, 584, 588, 608, 610
Fuji	678
Funai	588
Garrard	588
GE	550, 551, 552, 554, 572, 591, 605, 607, 675, 678, 679
Go Video	557, 558, 620, 685
Goldstar	592, 594, 676, 747
Goodmans	585, 589
Gradiente	588
Granada	549, 581
Grundig	556
Harmon/Kardon	568, 592
Harwood	681
Hinari	589
Hitachi	536, 538, 539, 540, 588, 595, 597, 680, 682, 686

VCR	CODES
ITT	518
JC Penney	554, 581, 591, 592, 594, 595, 600, 674, 675, 676, 678, 679, 680, 681, 685, 686
Jensen	595, 680, 682
JVC	561, 562, 563, 581, 592, 594, 600, 674, 682, 686
Kenwood	562, 581, 592, 594, 600, 674, 677, 682, 683
KLH	681
Kodak	676, 678
Lloyds	683
Logik	589, 681, 685
Luxor	518
LXI	676
Magnasonic	685
Magnavox	527, 533, 554, 556, 678, 679, 685
Marantz	554, 556, 581, 585, 592, 594, 600, 602, 674, 677, 678, 683
Matsushita	678
Memorex	507, 533, 549, 554, 566, 581, 585, 588, 608, 675, 676, 678, 686
MGA	512, 567, 568
Minolta	595, 680, 686
Mitsubishi	512, 562, 567, 568, 570, 571, 595, 680
Motorola	678
MTC	544, 588, 675, 685
Multitech	579, 588, 675, 677, 681
NAD	573
NEC	562, 581, 592, 594, 600, 602, 674, 677, 682, 683
Nikko	676
Noblex	675
Olympus	678
Optimus	676
Optonica	585
Orion	506

VCR	CODES
Panasonic	523, 554, 598, 614, 628, 633, 678, 679, 685, 747
Pentax	592, 595, 677, 680, 683, 686
Pentex Research	594
Perdio	588
Philco	554, 678, 679, 686
Philips	554, 556, 585, 678
Pioneer	562, 573, 574, 575, 576, 600, 674, 680,
Portland	546, 677
Proscan	605, 607
Proton	685
Quasar	554, 678, 679, 747,
Radio Shack	512, 607, 608, 610
Radio Shack/Realistic	581, 584, 588, 608, 675, 676, 678, 679
Radix	676
RCA	518, 525, 527, 528, 591, 595, 605, 607, 615, 631, 649, 675, 678, 680, 686
Realistic	534, 549, 554, 581, 584, 585, 588, 608, 675, 678, 679
Ricoh	502
Runco	533
Saisho	506
Salora	567, 581
Samsung	515, 517, 534, 579, 591, 675
Sansui	544, 562, 600, 674, 682, 685
Sanyo	549, 581, 582, 583, 608, 675
SBR	556
Schneider	589
Scott	508, 534, 559, 590
Sears	548, 549, 581, 584, 595, 608, 610, 676, 678, 680, 683, 686
Sentra	546
Sharp	512, 585, 607, 625
Shintom	589, 595, 681, 685
Singer	678, 681, 685

VCR	CODES
Sony	500, 501, 502, 504
STS	678
Sylvania	554, 556, 567, 588, 678, 679
Symphonic	588, 594, 683
Tandy	581, 588
Tashiko	588, 676
Tatung	594, 682,
Teac	588, 594, 682
Technics	554, 633, 678,
Teknika	554, 588, 676, 678
Toshiba	534, 535, 567, 584, 590, 680
Totevision	591, 675, 676
Unitech	675,
Vector Research	534, 592, 600, 674, 677, 683
Video Concepts	534, 568, 592, 600, 674, 677, 683,
Wards	534, 588, 595, 608, 675, 676, 678, 680, 681
XR-1000	588, 678, 681
Yamaha	581, 592, 594, 600, 674, 682, 683
Zenith	500, 501, 533, 747

TV/VCR COMBO CODES

Programming for combination equipment: Program the remote control in TV mode and then in VCR mode.

TV/VCR	TV Codes	VCR Codes
Broksonic	748	748
Goldstar	747	747
Panasonic	747	747
Quasar	747	747
Zenith	747	747

DVD PLAYER CODES

Programming in AUX mode: In most cases use these codes to program in VCR mode; however, if programming in AUX mode, press 1 before entering the VCR code.

DVD Players	Codes
Aiwa	634, 694, 751
Alpine	653
Apex	654, 655, 743, 744
Broksonic	656, 752
Clarion,	696
Classic	695
Daewoo	657
Denon	697, 698, 699, 700
Emerson	658, 701
Fisher	659
Funai	658
GE	702, 703
Go Video	692, 693
GPX	704
Hitachi	632, 635, 660, 705, 706, 707
JVC	636, 689, 708, 711
Konka	637, 638, 753
Koss	745
Magnavox	626, 661
Memorex	709
Mintek	710
Mitsubishi	629
NAD	701
Norcent	762
Onkyo	713
Oritron	723
Panasonic	639, 662, 663, 714, 715, 716, 717, 734
Philips	640, 641
Pioneer	665, 718, 719
Proscan	720
Qwestar	721, 723
RCA	627, 650, 666, 690, 742, 749
Sampo	724

DVD Players	Codes
Samsung	651, 652, 667, 668, 691, 740, 741
Sansui	725, 754
Sanyo	643, 726
Sharp	669, 727, 746
Sherwood	728
Sony	617, 644, 645, 670, 671, 729, 730, 731
Sylvania	658
Teac	732
Technics	733
Techwood	664
Toshiba	616, 646, 647, 672, 735, 736, 750,
Yamaha	737, 738, 739
Zenith	648, 673

TUNER/AMPLIFIER CODES

Programming in AUX mode:

Press 2 before entering the tuner/amplifier code.

Tuner/ Amplifier	Codes
Aiwa	636, 641, 656, 687, 718, 720, 724, 775, 726
Carver	653
Citizen	709
Curtis Mathes	734
Denon	647, 674
Fisher	653, 741
GE	711
Goldstar	677, 690
Harmon/Kardon	640, 672, 751
Hitachi	717, 754
JBL	640
JVC	637, 683, 703, 725
Kenwood	649, 676, 691, 726, 728, 745
Luxman	752
Magnavox	654, 705, 740

Tuner/ Amplifier	Codes
Marantz	651, 740, 742, 743
NAD	739
Nakamichi	671, 748, 750
NEC	716, 739
Onkyo	642, 660, 662, 678
Optimus	648, 664, 734, 744, 749
Panasonic	643, 644, 652, 742, 746
Pioneer	658, 667, 668, 679, 702, 734
Proton	654, 705
Quasar	652, 742, 746
Radio Shack	744
RCA	635, 638, 704, 727
Sansui	753
Sanyo	741
Sharp	712, 713, 714, 715, 749
Sherwood	646, 670, 736, 738, 744
Sony	639, 645, 650, 687, 728, 729, 730
Teac	684, 737
Technics	643, 644, 652, 742, 746
Toshiba	710
Yamaha	663, 730, 731, 732, 733, 745, 747

DVD/VCR COMBO CODES

Programming for combination

equipment: Use VCR mode to control VCR and DVD functions; however, if programming in AUX mode, press 1 before entering the DVD/VCR code.

DVD/VCR	Codes
Go Video	692,693
JVC	689
RCA	690
Samsung	667,691

TV/DVD COMBO CODES

Programming for combination

equipment: Program the remote control in TV mode and then in VCR (or AUX - press 1 before entering the DVD code) mode.

TV/DVD	TV Codes	DVD Codes
Aiwa	751	751
Broksonic	752	752
Konka	753	753
Panasonic	734	734
RCA	749	749
Sansui	754	754
Toshiba	750	750

Appendix A

WHAT KIND OF RECEIVER DO YOU HAVE?

These instructions are to guide you through the installation of new satellite receiver in an existing system where your satellite dish(es) has already been installed and pointed for the strongest possible signal. If your DISH antenna(s) is not already installed, you will need to go to page 59, and follow the *Installation Instructions* you will find there.

There are two families of satellite receivers that are covered by these installation instructions.

- Dishpro Receivers which have the DishPro logo shown below.



- Legacy receivers which do not have the DishPro logo.

Both types of receivers can be installed in Dish antenna systems with either DishPro LNBFs and switches (with the DishPro logo) or Legacy LNBFs and switches (without the DishPro logo).

The first step is to identify whether your new receiver is DishPro or Legacy.
Then:

- If the new receiver has the DishPro logo and your existing system has DishPro LNBFs, follow the instructions on the following page titled ***Installing a DishPro Receiver in an Existing System with DishPro LNBFs***. This will tell you how to install your receiver, and then allow it to take a special software upgrade.
- If your new receiver does not have the DishPro logo and your existing system does have DishPro LNBFs and switches, you will need a DishPro adapter. For more information on this, contact your DISH Network retailer or call 1-800-333-DISH (3474) for more information. You will find the instructions for doing this installation with the DishPro adapter.
- If you are installing either a DishPro or Legacy receiver into an existing system with Legacy LNBFs and switches, you will need to go to page 116 and follow the instructions titled *Installing a DishPro or Legacy Receiver in an Existing System with Legacy LNBFs*.

INSTALLING A DISHPRO RECEIVER INTO AN EXISTING SYSTEM WITH DISHPRO LNBFs

Your DishPro satellite receiver has an advanced satellite tuner. While it is completely compatible with DishPro LNBFs and switches, its software may need to be upgraded via satellite for it to fully function as designed and provide all the many benefits of DishPro technology.

FOLLOW THESE INSTRUCTIONS

1. Connect the new DishPro receiver to your existing DishPro system via RG-6 coaxial cable rated for 950 to 2150 MHz.

Note: Some cables may say “Swept tested for 2150 MHz.” If you have any doubt about this, ask your Dish retailer, or look on the container the cable came in. Do not use cable company TV cables or cables from other satellite TV systems not rated for 950-2150 MHz. These other cables may cause signal loss. Do not use existing cable setups with cables such as RG-59.

Note: If any of your connections will be outdoors, be sure to use waterproof F-connectors.

2. For the best and easiest installation, make sure your existing receiver is turned On and still connected to the satellite dish.

Note: If for some reason you do not have an existing receiver in your system, follow this procedure anyway, omitting step #2.

3. Connect the receiver’s **TV Out** to your television’s RF tuner input using coaxial cable. Check to see that the **Channel 3/4** switch on the new receiver’s back panel is set to the same channel 3 or 4 as your TV. Make sure both the receiver and TV are turned on.
4. You should see the **Point Dish/Signal** menu in the new receiver. If you do not, open the **Main Menu**, and then press 6-1-1 on the remote.
5. Look to make sure the number under **Transponder** is an odd number higher than 10 (for example, 11, 13, or 15). If you do not see an odd number higher than 10, move the highlight to the box under **Transponder** and use the UP or DOWN ARROW on the remote to change the number until it is an odd number higher than 10.

If you see the message, **Wrong Sat**, this is okay and does not indicate a problem.

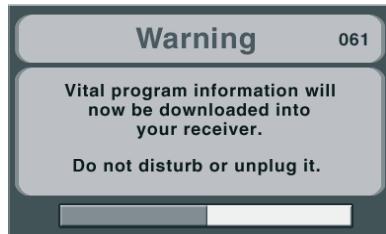
6. You should see a green bar indicating that the receiver has a signal.

Note: If you do not see a green bar and you did not have an existing receiver in the system (per step #2), direct connect the receiver to the LNBF on the satellite dish making sure there are no switches between the receiver and the LNBF. When you have finished this, go on to step #7.

7. Press Cancel on the remote to exit the **Point Dish/Signal** screen.
8. An **Attention** screen will open.

This screen asks if the mounting and positioning of your dish is complete with a “Locked” indication in the **Point Dish/Signal** screen. Since your system is already installed and your dish is pointed for the strongest possible signal strength, you can select **Yes**.

9. The receiver will begin taking a software upgrade. You will see the message shown below.



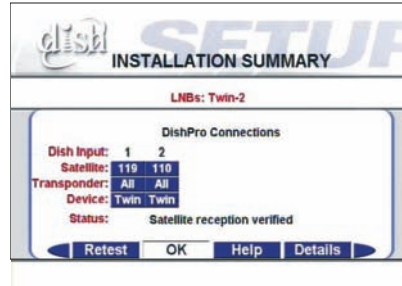
A progress bar at the bottom of the screen will show how the software upgrade is progressing. Once the software upgrade is complete, you will see a second message that the receiver’s memory is now being programmed.

This message may disappear, your screen may go blank for a few minutes, and the green light may continue to blink. This is normal and does not indicate a problem with the receiver.

10. When the software upgrade is complete, you will need to go back to the **Point Dish/Signal** screen. To do this, open the **Main Menu** and press 6-1-1 on the remote.
11. If you removed any switches in step #6, reconnect them now.
12. Select **Check Switch**. An **Attention** screen will open. Select **Check** to run **Check Switch**.
13. A second **Attention** screen will open asking you to please wait while your switch installation is being checked.
14. When **Check Switch** is complete, you will see this **Installation Summary** screen.

Note: Your summary screen may look different from the one shown here, depending on what switches and LNBFs are in your system. However, you must see that you have input from all the satellites in your system,

and the message “Satellite reception verified.” If not, you will need to check all your cables and connections, and then run Check Switch again.



INSTALLING A DISHPRO OR LEGACY RECEIVER IN AN EXISTING SYSTEM WITH LEGACY DUAL LNBFS

Note: Use RG-6 cable for all receiver to switch or LNBFS connections, and make sure there is less than 100 feet of cable between the receiver and the dish.

1. Connect the new receiver's **TV Out** to your television's RF tuner input using coaxial cable. Check to see that the **Channel 3/4** switch on the new receiver's back panel is set to the same channel 3 or 4 as your TV. Make sure both the receiver and TV are turned on.
2. Go to page 76 and do steps #6 through #12, omitting steps #8 and #9 as your dish is already pointed for the strongest possible signal.

INSTALLING A DISHPRO OR LEGACY RECEIVER IN AN EXISTING SYSTEM WITH LEGACY TWIN LNBFS

Note: Use RG-6 cable for all receiver to switch or LNBFS connections, and make sure there is less than 100 feet of cable between the receiver and the dish.

1. Connect the new receiver's **TV Out** to your television's RF tuner input using coaxial cable. Check to see that the **Channel 3/4** switch on the new receiver's back panel is set to the same channel 3 or 4 as your TV. Make sure both the receiver and TV are turned on.
2. Go to page 79 and do steps #6 through #12, omitting steps #7 and #8 as your dish is already pointed for the strongest possible signal.

Appendix B

LIMITED WARRANTY



This **Limited Warranty** is a legal document. Keep it in a safe place. Remember to retain your Bill of Sale for warranty service! Any items returned without a copy of the Proof of Purchase will be considered out of warranty.

WHAT THE WARRANTY COVERS

This warranty extends only to the original user of the equipment and is limited to the purchase price of each part. EchoStar Technologies Corporation and its affiliated companies (“EchoStar”) warrant this system against defects in materials or workmanship as follows:

- **Labor:** For a period of one (1) year from the original date of purchase, if EchoStar determines that the equipment is defective subject to the limitations of this warranty, it will be replaced at no charge for labor. EchoStar warrants any such work done against defects in materials or workmanship for the remaining portion of the original warranty period.
- **Parts:** For a period of one (1) year from the original date of purchase, EchoStar will supply, at no charge, new or re-manufactured parts in exchange for parts determined to be defective subject to the limitations of this warranty. EchoStar warrants any such replacement parts against defects in materials or workmanship for the remaining part of the original warranty period. **Note:** “Parts” means items included in this package, which may include the satellite dish assembly, receiver, LNBF, remote control, or dish mounting hardware. It does *not* include other parts purchased separately.

WHAT THE WARRANTY DOES NOT COVER

- This warranty does not cover installation of the system. If applicable, such installation will be warranted under a separate installation agreement.
- This warranty does not cover consumer instruction, physical setup or adjustment of any consumer electronic devices, remote control batteries, signal reception problems, loss of use of the system, or unused programming charges due to system malfunction.
- This warranty does not cover cosmetic damage, damage due to lightning, electrical or telephone line surges, battery leakage, fire, flood, or other acts of Nature, accident, misuse, abuse, repair or alteration by other than authorized factory service, use of accessories not recommended by the receiver manufacturer, negligence, commercial or institutional use, or improper or neglected maintenance.
- This warranty does not cover equipment sold AS IS or WITH ALL FAULTS, **shipping and handling**, removal or reinstallation, shipping damage if the equipment was not packed and shipped in the manner prescribed, nor equipment purchased, serviced, or operated outside the continental United States of America.

LEGAL LIMITATIONS

REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS YOUR EXCLUSIVE REMEDY. ECHOSTAR SHALL NOT BE HELD LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESSED OR IMPLIED WARRANTY ON THIS SYSTEM, NOR FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF, OR INABILITY TO USE, THIS SYSTEM. UNDER NO CIRCUMSTANCES SHALL ECHOSTAR'S LIABILITY, IF ANY, EXCEED THE PURCHASE PRICE PAID FOR THIS SYSTEM. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS SYSTEM IS LIMITED IN DURATION TO THE PERIOD OF THIS WARRANTY. ECHOSTAR RESERVES THE RIGHT TO REFUSE TO HONOR THIS WARRANTY IF ECHOSTAR DETERMINES ANY OF THE ABOVE EXCEPTIONS TO HAVE CAUSED THIS SYSTEM NOT TO HAVE PERFORMED PROPERLY. THIS WARRANTY SHALL BE VOID IF ANY FACTORY-APPLIED IDENTIFICATION MARK, INCLUDING BUT NOT LIMITED TO SERIAL OR CONDITIONAL ACCESS NUMBERS, HAS BEEN ALTERED OR REMOVED. THIS WARRANTY SHALL ALSO BE VOID IF THE RECEIVER HAS BEEN OPENED BY AN UNAUTHORIZED PERSON. IDENTIFICATION MARK, INCLUDING BUT NOT LIMITED TO SERIAL OR CONDITIONAL ACCESS NUMBERS, HAS BEEN ALTERED OR REMOVED. THIS WARRANTY SHALL ALSO BE VOID IF THE RECEIVER HAS BEEN OPENED BY AN UNAUTHORIZED PERSON.

IF YOU NEED ASSISTANCE

1. Call the Customer Service Center at 1-800-333-DISH (3474). Have the date of purchase and either your customer account number, the receiver conditional access number, or the receiver model number ready. Display the Important System Information menu to find these numbers.
2. A Customer Service Representative will assist you.
3. If the Representative determines you should return any equipment, you will be directed to call a Return Authorization representative. Before shipping any equipment, you must talk to a Return Authorization representative and must obtain a Return Authorization (RA) number.
4. You will be given the appropriate address for which to return your equipment. Whether under warranty or not, you will be responsible for the cost of shipping back the defective equipment. For faster service, see the Advance Exchange Program below.
5. Returned equipment must be packaged properly, using either the original shipping materials or the packaging in which the replacement equipment is shipped. Include a copy of the Bill of Sale. Any items returned without a copy of the Proof of Purchase will be considered out of warranty. Follow the instructions given to you by the Customer Service Representative.
6. Write the RA number in large, clearly visible characters on the outside of the shipping box that you use to return the equipment. To avoid confusion and misunderstandings, shipments without an RA number clearly visible on the outside of the box will be returned to you at your expense.

ADVANCE EXCHANGE PROGRAM

The Advance Exchange Program allows you to have replacement equipment shipped immediately to you (depending upon where you live, it could take three to five business days). Along with replacement equipment, you will receive a prepaid shipping label and instructions on how to return the defective equipment.

The shipping charge, for receiving replacement equipment and returning the defective equipment, is a one-time fee based on EchoStar's competitive bulk shipping rates (additional charges may apply outside of the continental US). This fee will be charged to your billing account or your valid credit card.

If you do not ship the defective equipment to EchoStar within ten days after receiving the replacement, your billing account or credit card will be charged the market price of the replacement. If you return the defective equipment after ten days, you will receive a full refund less an administrative fee.

If your equipment is out of warranty and can be repaired your billing account or credit card will be charged the standard repair fee for the replacement. If damage to the defective equipment is found, which EchoStar in its sole discretion determines has voided the warranty, or makes the

equipment unrepairable, billing account or credit card will be charged the market price of the replacement.

POST RECEIPT EXCHANGE PROGRAM

You may choose to ship the equipment to us at your cost. To provide faster service, upon receipt of your equipment you will be shipped a replacement. Your original equipment will not be available for return.

The equipment you return will be checked to verify whether it is covered under this warranty. If the defective equipment is covered under this warranty, it will be replaced and shipped back to you at no additional cost (additional charges may apply outside of the continental US).

If your equipment is out of warranty and can be repaired your billing account or credit card will be charged the standard repair fee for the replacement. If damage to the defective equipment is found, which EchoStar in its sole discretion determines has voided the warranty, or makes the equipment unrepairable, your billing account or credit card will be charged the market price of the replacement.

ACCESSORY WARRANTY

An accessory is any DISH Network branded equipment, displaying the DISH Network logo, excluding the receiver, cables and hookups, and non-mechanical components. A one-year warranty becomes effective upon the activation of the DISH system or date of purchase, if bought separately. A proof of purchase is required to verify the purchase date. If an accessory has an expired warranty, no exchange will be issued. You may purchase replacement accessories from DISH Network or your local retailer.

RESIDENTIAL CUSTOMER AGREEMENT

Thank you for choosing DISH Network as your television service provider. DISH Network is happy to answer any questions you may have and to provide you with technical and other customer support. You may contact us 24 hours a day, any day of the year, by any of the following means:

Phone: 1 (800) 333-DISH (3474)
Email: feedback@customermail.dishnetwork.com
Mail: DISH NETWORK CUSTOMER SERVICE CENTER
P.O. BOX 9033
LITTLETON, CO 80160
Website: www.dishnetwork.com

To view this Residential Customer Agreement (the "Agreement") in Spanish, please visit our website at www.dishnetwork.com or call us at 1 (800) 333-DISH and we will send you a copy. Para ver este Acuerdo en español por favor visite www.dishnetwork.com o llame al 1(800)333-DISH y le enviaremos una copia. "DISH Network" is a trademark of EchoStar Satellite L.L.C. For purposes of this Agreement and any customer agreement(s) applicable to the promotion(s) pursuant to which you are receiving Services and/or Equipment, "DISH Network", "we" or "us" shall mean EchoStar Satellite L.L.C. or, where applicable under the particular circumstances, third party billing agents, and "you" or "your" refer to you, the DISH Network subscriber.

THIS RESIDENTIAL CUSTOMER AGREEMENT DESCRIBES THE TERMS AND CONDITIONS UNDER WHICH DISH NETWORK WILL PROVIDE ITS SERVICES TO YOU. THIS AGREEMENT IS EFFECTIVE UNTIL CHANGED OR REPLACED. IF YOU ARE AN EXISTING DISH NETWORK CUSTOMER AND DO NOT ACCEPT THESE TERMS AND CONDITIONS, OR ANY SUBSEQUENT CHANGES TO, OR REPLACEMENT OF, THESE TERMS AND CONDITIONS, PLEASE NOTIFY US IMMEDIATELY AND WE WILL AT OUR OPTION CANCEL YOUR SERVICES OR ALLOW YOU TO CONTINUE TO RECEIVE YOUR SERVICES UNDER THE TERMS AND CONDITIONS OF YOUR IMMEDIATELY PRIOR RESIDENTIAL CUSTOMER AGREEMENT. IF YOU ARE A NEW DISH NETWORK CUSTOMER, YOUR ACTIVATION OF A DISH NETWORK ACCOUNT AND RECEIPT OF DISH NETWORK SERVICES SHALL CONSTITUTE YOUR ACCEPTANCE OF THIS AGREEMENT AND ITS TERMS

AND CONDITIONS WILL BE LEGALLY BINDING UPON YOU. IF YOU ARE AN EXISTING DISH NETWORK CUSTOMER, WE WILL NOTIFY YOU OF ANY CHANGES TO, OR REPLACEMENT OF, THE TERMS AND CONDITIONS OF THIS AGREEMENT AND YOUR CONTINUED RECEIPT OF DISH NETWORK SERVICES FOLLOWING RECEIPT OF SUCH NOTICE SHALL CONSTITUTE YOUR ACCEPTANCE OF SUCH CHANGED OR REPLACED TERMS AND CONDITIONS AND THEY WILL BE LEGALLY BINDING ON YOU.

1. THE DISH NETWORK SERVICE

A. **Services Defined.** For purposes of this Agreement, the term "Services" shall mean all video, audio, interactive and other programming services and all other services that are currently available from DISH Network (whether subscription based, pay-per-view based or otherwise) and that we may provide to consumers in the future.

B. **Changing Your Programming Selection.** Unless otherwise specified in this Agreement or the customer agreement(s), if any, applicable to the promotion(s) pursuant to which you are receiving Services and/or Equipment, you may change your programming selection at any time by notifying us. A fee may apply to such changes ("Transaction Fee"). In addition (and without limitation), you may be charged a monthly fee ("Service Access Fee") if you fail to subscribe to one of the following DISH Network basic programming packages: America's Top 60, America's Top 120, America's Top 180, Great Wall TV Package, DISH Latino, DISH Latino Dos, DISH Latino Max, America's "Everything" Pak, Latino "Everything" Pak, or any of their successor packages. Some Services are only available if you purchase and maintain a minimum level of programming.

C. **Programming Availability.** Certain Services transmitted by us, including but not limited to some subscription Services, sporting events and broadcast network Services, may be blacked out in your area of reception. If you circumvent or attempt to circumvent any of these blackouts, you may be subject to legal action. You must be at least 18 years of age, or the applicable age of majority where you reside, in order to receive adult-oriented programming services.

D. **Ordering Pay-Per-View.** You may order DISH Network special events and pay-per-view Services by using your on-screen Program Guide and remote control unit to select the movies and other events we offer. To receive the full functionality of DISH Network pay-per-view Services, your DISH Network receiver must be connected to a land-based telephone line. You may also order DISH Network special events and pay-per-view Services by calling the following toll free number: 1-877-DISH-PPV (3474-7778) and using our automated system or speaking with a live operator at one of our Customer Service Centers. A fee will apply for using our automated system ("Pay-Per-View Automated Fee") or calling one of our Customer Service Centers ("Pay-Per-View Live Operator Fee").

E. **Private Home Viewing Only.** DISH Network provides Services to you solely for your private home viewing, use and enjoyment. You agree that no Services provided to you will be viewed in areas open to the public or in commercial establishments. Services may not be rebroadcast, nor performed, nor may admission be charged for listening to or viewing any Services. If we later determine that you utilized your Equipment (or sold, leased or otherwise gave possession of such equipment to a third party who you knew or reasonably should have known intended to use it) to permit the viewing of Services in a commercial establishment or any other area open to the public, we may disconnect your Services and in addition to all other applicable fees, you agree to pay us the difference between the price actually paid for Services and the full commercial rate for such Services, regardless of whether we have or had the rights to distribute such Services in a commercial establishment.

F. **Additional Tuners and Receivers.** We may allow you to place additional receivers on your account in our sole discretion. Each additional receiver will be authorized to receive the same Services as your initial receiver. This option is only available if your initial DISH Network receiver and all additional receiver(s) are located at the same residence and are continuously connected to your same land-based telephone line. Unless otherwise specified in the customer agreement(s), if any, applicable to the promotion(s) pursuant to which you are receiving Services and/or Equipment, DISH Network will charge you a monthly additional outlet programming access fee ("Additional Outlet Programming Access Fee") for each tuner activated on your account beyond the first. If you desire to receive Services at two different residential locations, you must open a separate account for each location. You agree that you will not directly or indirectly use a single account for the purpose of authorizing Services for multiple DISH Network receivers that are not all located in the same residence and connected to your same land-based telephone line. If we later determine that you did, we may disconnect your Services and, in addition to all other applicable fees, you agree to pay us the difference between the amounts actually received by us and the full retail price for the Services authorized for each DISH Network receiver on your account.

G. **Changes in Services Offered.** We reserve the right to add, delete, rearrange and/or change any and all programming, programming packages and other Services that we offer, and our prices and fees related to such programming, programming packages and Services at any time, including without limitation during any term agreement period to

which you have agreed under the terms and conditions of any other agreement with DISH Network. If a change affects you, we will provide you notice of such change and its effective date. In the event that we delete, rearrange or change any programming, programming packages or other Services, you understand and agree that we have no obligation to replace or supplement any programming, programming packages or other Services previously offered that have been deleted, rearranged or otherwise changed. You further understand and agree that you will not be entitled to any refund because of a deletion, rearrangement or change in the contents of any programming, programming packages, or other Services previously offered.

H. Multi-Month Subscriptions. For multi-month subscriptions, you may downgrade your Services only at your time of renewal. You may not downgrade your Services during the term of a multi-month subscription.

2. BILLING POLICIES AND PAYMENTS FOR SERVICES

A. You agree to pay all amounts billed for Services and to pay all taxes, fees and other charges, if any, which are now or may in the future be assessed in connection with any Services you receive from us. Unless you prepay for a multi-month subscription to Services, we will bill you each month, in advance, for most Services and in arrears for other Services such as pay-per-view ordered by you or anyone who uses your Equipment, whether with or without your permission, until you cancel your Services. Bills you receive will show the total amount due, the payment due date, payments, credits, purchases and certain other charges to your account.

B. You agree to pay us in full monthly by the payment due date indicated on your bill for your Services and for any other charges due and owing to us, including without limitation any fees named in this Section 2. If you do not pay your bill in full on or before its due date, you agree to pay an administrative fee for late payment ("Late Payment Fee") as described below. Other fees and charges may also be assessed, including without limitation a returned payment fee ("Returned Payment Fee") in the event such non-payment arises from non-sufficient funds. If you request a duplicate billing statement, you will be assessed an additional fee (also referred to as a "Transaction Fee"). You may submit your payment by mail, on our website, through our autopay program, by calling a DISH Network customer service representative or by any other means we may designate. If payment is made by calling a DISH Network customer service representative, a fee will be assessed ("Live Operator Payment Fee") as described below. If partial payments are made, they will be applied first to the oldest outstanding bill. We do not assume the risk of undelivered mail. If you send checks or money orders marked with a designation such as "payment in full," we can accept them without waiving any of our rights, including without limitation our rights to collect any other amounts owed by you, notwithstanding your characterization of such payment. DISH Network does not extend credit to our customers, and the Late Payment Fee is not interest, a credit service charge or a finance charge. You understand and agree that in the case of late payment or nonpayment for any Services ordered by you or for any of the charges stated below, we may report such late payment or nonpayment to credit reporting agencies. If you do not pay your bill in full by its due date, or if you at any time otherwise fail, neglect or refuse to make timely payment for your Services, we have the right to disconnect your Services at any time thereafter, in our sole discretion, and in such event we shall be wholly relieved from any and all of our duties and obligations under this Agreement. If your Services are disconnected for non-payment or for any other reason, DISH Network may require you to pay, and you agree to pay, all past due charges, a fee for reconnection ("Restart Fee"), a deposit equal to a minimum of two month's service charges and all outstanding balances accrued through the date of such disconnection, before we reconnect your Services. Unless required by applicable law, deposits will not be held segregated from other funds and shall not earn or accrue interest. Promotional pricing is valid only at time of installation. Additional charges may apply for you to upgrade your Services or Equipment after installation or for non-standard installations.

C. If you paid for an annual or other multi-month subscription to any Services and your account is past due for any amount owed to us, at our option we may suspend any or all Services until we receive payment in full of all past due amounts, and/or convert your annual or other multi-month subscription to a monthly subscription. If we convert your multi-month subscription to a monthly subscription, we will first apply the amount you paid for your multi-month subscription to any past due amounts and then any remaining amounts to any obligations you incur in the future.

D. If we use a collection agency or attorney to collect any money you owe us or to assert any other right which we may have against you, you agree to pay the reasonable costs of collection or other action. These costs might include, but are not limited to, the costs of a collection agency, reasonable attorney's fees and court costs. If there are billing errors or other requests for credit, you may contact our Customer Service Center by telephone or in writing. You must contact us within twenty (20) days after the date you receive the billing statement for which you are seeking corrections. Failure to timely notify us of a dispute shall constitute your acceptance of the corresponding bill. Undisputed portions of a billing statement must be paid before the next billing statement is issued or you agree

to pay an administrative fee for late payment. All payments for Services must be made directly by you to us. For example, DISH Network shall have no obligation to provide Services for which payment is made by you to a third party or payment is made by a third party on your behalf.

E. In addition to (and without limitation of) any amounts due for your Services and any other amounts due pursuant to any customer agreement(s) pursuant to which you are receiving Services and/or Equipment, you agree to pay the fees referenced below ("Fees") if and when applicable. DISH Network reserves the right to change these Fees, increase these Fees or add additional Fees at any time and from time to time, in our sole discretion upon notice to you.

Additional Outlet Programming Access Fee	
(monthly, per each tuner after first):.....	\$4.99
DISH Network DVR Service Fee (monthly, per	
Digital Video Recording receiver):.....	\$4.98
Equipment Rental Fee (monthly, per leased receiver)	\$5.00
Late Payment Fee:.....	\$5.00
Live Operator Payment Fee:.....	\$5.00
Offset Fee:	\$2.00
Overnight Delivery Fee:	\$18.00
Pay-Per-View Automated Fee:.....	\$1.00
Pay-Per-View Live Operator Fee:	\$5.00
Restart Fee:	\$25.00
Returned Payment Fee:.....	\$10.00
Service Access Fee (monthly):	\$5.00
Smart Card Replacement Fee:	\$50.00
Transaction Fee:	\$5.00

In the event billing is provided through a third-party billing agent, the above fees may differ.

F. Different or other payment and billing terms and conditions may apply when billing is provided through a third-party billing agent, including without limitation, a local telephone company. See Section 9.F below.

3. CANCELLATION OF SERVICE

A. Your Services will continue until cancelled or disconnected as provided herein. Unless previously disconnected, your subscription will be automatically renewed unless and until you contact us to cancel it as provided in the next paragraph.

B. You have the right to cancel your Services for any reason and at any time by notifying us via telephone, via e-mail or in writing, at the phone number, e-mail address or mailing address set forth in the first paragraph of this Agreement. Please be aware that certain promotions have an optional or mandatory term agreement period and if you cancel your Services prior to the expiration of that optional or mandatory term agreement period, certain early termination or cancellation fees may apply.

C. In addition to all other rights that DISH Network may have to disconnect your Services, DISH Network has the right to disconnect your Services at any time without providing notice to you if: (i) you fail to pay any bill in full when it is due; (ii) we receive confirmation that you have received Services, or any part of the Services, without paying for them; (iii) you otherwise violate the terms and conditions of this Agreement or any customer agreement(s) applicable to the promotion(s) pursuant to which you are receiving Services and/or Equipment; (iv) you transfer, encumber or relocate any leased Equipment (unless you relocate such equipment as part of a residential move into an area within which you can permissibly continue to receive such Services); (v) you assign or attempt to assign any of your rights, duties or obligations under the terms and conditions of this Agreement or any customer agreement(s) applicable to the promotion(s) pursuant to which you are receiving Services and/or Equipment; (vi) you are receiving Services through a third-party billing agent and become ineligible to receive applicable services provided by such third-party billing agent; or (vii) any act of bankruptcy on your part or the commencement of bankruptcy proceedings against you.

D. If your Services are canceled or disconnected for any reason, you are still responsible for the payment of all outstanding balances accrued, including without limitation any applicable Fees.

E. You understand that, except in certain limited circumstances, charges for Services, once charged to your account, are nonrefundable and no refunds or credits will be provided in connection with the cancellation of subscriptions to Services. If you received a discounted price in exchange for your agreement to pay for your Services on a multi-month basis, and you cancel your Services prior to the expiration of your multi-month subscription, you understand and agree that you are not entitled to any refund or credit for the unused portions of your multi-month subscription.

4. EQUIPMENT

A. In order to receive Services it will be necessary for you to purchase or lease certain reception equipment consisting primarily of a DISH Network compatible satellite receiver(s), satellite antenna(s), low noise block converter(s) with integrated feed(s) and remote control(s) (collectively, "Equipment"). Receiver(s) provided to you may also be equipped with a conditional access card ("Smart Card") inserted into a slot in such receiver. Not all receivers with a Smart Card slot require Smart Cards for proper authorization. Smart Cards remain the property of DISH Network at all times and any tampering or other unauthorized modification to any Smart Card is strictly prohibited and may result in, and subject you to, legal action. You agree to return Smart Cards to us upon our request.

B. Smart Cards are non-transferable. Your Smart Card will only work in the DISH Network receiver to which it was assigned by DISH Network. If you report to our Customer Service Center that your Smart Card was lost, damaged, defective or stolen, then we will replace it, as long as there is no evidence of unauthorized tampering or modification. A replacement fee will apply ("Smart Card Replacement Fee"). In addition, in order to minimize downtime for your Equipment, DISH Network will, upon your request, deliver a replacement Smart Card to you via overnight delivery in which event our overnight delivery fee ("Overnight Delivery Fee") will apply.

C. DISH Network reserves the rights to alter software, features and/or functionality in your DISH Network receivers, provide data and content to Personal Video Recorder/ Digital Video Recorder ("PVR/DVR") products, store data and content on the hard drives of PVR/DVR products, and send electronic counter-measures to your DISH Network receivers, through periodic downloads. DISH Network will use commercially reasonable efforts to schedule these downloads to minimize interference with or interruption to your Services, but shall have no liability to you for any interruptions in Services arising out of or related to such downloads.

D. DISH Network's PVR/DVR Products allow you to record programming in digital format. Total recording time varies depending on your receiver and the nature of the programs being recorded. DISH Network does not guarantee access to or recording of any particular programming. Most programming is the copyrighted material of the third party that supplies it, is protected by copyright and other applicable laws, and may not be reproduced, published, broadcast, rewritten, or redistributed without the written permission of the third party that supplied it except as permitted by the "fair use" provisions of the U.S. copyright laws. DISH Network may, in its sole discretion, add, change or remove features of its PVR/DVR Products and, upon notice to you, introduce or change fees for the use of PVR/DVR Product features. DISH Network will notify you of any change that is within its reasonable control. Unless otherwise specified in the terms and conditions of the customer agreement(s) applicable to the promotion(s) pursuant to which you are receiving Services and/or Equipment, we will charge you a monthly DISH Network DVR service fee ("DISH Network DVR Service Fee") for each PVR/DVR receiver activated on your account.

E. DISH Network receivers contain components and software that are proprietary to DISH Network. You agree that you will not try to reverse-engineer, decompile or disassemble any software or hardware contained within any receiver or Smart Card. Such actions are strictly prohibited and may result in the termination of this Agreement, disconnection of your Services and/or legal action.

F. To optimize the operation of your Equipment, you must continuously connect each DISH Network receiver on your account to your same land-based telephone line. Failure to connect each receiver to your same land-based telephone line may result in interruption or disconnection of Services.

G. If your Equipment is stolen or otherwise removed from your premises without your authorization, you must notify our Customer Service Center by telephone or in writing immediately, but in any event not more than three (3) business days after such removal to avoid liability for payment for unauthorized use of your Equipment. You will not be liable for unauthorized use that occurs after we have received your notification.

H. You are licensed to use the software provided in your DISH Network receiver(s), as updated by DISH Network from time to time, solely in executable code form, solely in conjunction with lawful operation of the DISH Network receiver(s) that you purchased or leased, and solely for the purposes permitted under this Agreement. You may not copy, modify or transfer any software provided in your DISH Network receiver(s), or any copy thereof, in whole or in part. You may not reverse engineer, disassemble, decompile or translate such software, or otherwise attempt to derive its source code, except to the extent allowed under any applicable laws. Any attempt to transfer any of the rights, duties or obligations of this license agreement is null and void. You may not rent, lease, load, resell for profit or distribute any software provided in your DISH Network receiver(s), or any part thereof. Such software is licensed, not sold, to you for use only under the

terms and conditions of this license agreement, and DISH Network and its suppliers reserve all rights not expressly granted to you. Except as stated above, this license agreement does not grant to you any intellectual property rights in the software provided in your DISH Network receiver(s). If you breach any term or condition of this license agreement, this license agreement will automatically terminate.

5. LEASED EQUIPMENT

A. DISH Network may, from time to time, lease certain Equipment to subscribers. If you elect to lease Equipment from DISH Network, the terms and conditions of the customer agreement(s) applicable to the lease promotion(s) pursuant to which you are leasing such Equipment shall apply, which are in addition to (and without limitation of) the terms and conditions of this Agreement. Unless otherwise specified in such customer agreement(s): (i) such Equipment, except for the satellite antenna, shall at all times remain the sole and exclusive property of DISH Network and we will have the right, in our sole discretion, to provide or replace leased Equipment with new or reconditioned Equipment and to remove, or require the return of, such Equipment upon cancellation or disconnection of your Services for any reason and (ii) we will charge you a monthly equipment rental fee (an "Equipment Rental Fee") for each leased receiver activated on your account. No leased Equipment provided to you by DISH Network shall be deemed fixtures or part of your realty. Our ownership of such Equipment may be displayed by notice contained on it. You shall have no right to pledge, sell, mortgage, otherwise encumber, give away, remove, relocate, alter or tamper with such Equipment (or any notice of our ownership thereon) at any time. Any reinstallation, return, or change in the location of such Equipment shall be performed by us at our service rates in effect at the time of such service. You shall not attach any electrical or other devices to, or otherwise alter, any such Equipment without our prior written consent. We reserve the right to make such filings as may be determined to be necessary by us in our sole discretion to evidence our ownership rights in such Equipment, and you agree to execute any and all documents as may be so determined to be necessary for us to make such filings. You are responsible for preventing the loss or destruction of leased Equipment and we recommend that such Equipment be covered by your homeowners, renters or other insurance policy.

B. Upon termination of your Services, you must notify our Customer Service Center or call the telephone number set forth in the customer agreement(s) applicable to the lease promotion(s) pursuant to which you are leasing the applicable Equipment to schedule the return of your leased Equipment. If such Equipment is not returned undamaged and in working order, normal wear and tear excepted, certain charges will apply as described in the customer agreement(s) applicable to the lease promotion(s) pursuant to which you are leasing such Equipment. You are responsible for, and agree to pay, any costs of repair, replacement or other costs if you do not return such Equipment undamaged and in working order, normal wear and tear excepted.

C. You shall notify us promptly of any defect in, damage to, or accident involving your leased Equipment. All maintenance and repair of such Equipment shall be performed by us or our designee(s). DISH Network may charge you for any repairs that are necessitated by any damage to, or misuse of, such Equipment.

6. TRANSFER OF ACCOUNT, SERVICES OR EQUIPMENT

DISH Network may sell, assign or transfer your account to a third party without notice to you. You may not assign or transfer your Services without our written consent, which will not be unreasonably withheld. We may, however, refuse to allow you to assign or transfer your Services if you lease your Equipment or if your account has an outstanding balance.

7. LIMITATION OF OUR LIABILITY

A. NEITHER WE NOR OUR THIRD PARTY BILLING AGENTS NOR ANY OF OUR OR THEIR AFFILIATES WILL BE LIABLE FOR ANY INTERRUPTIONS IN SERVICE OR FOR ANY DELAY OR FAILURE TO PERFORM, INCLUDING WITHOUT LIMITATION IF SUCH INTERRUPTION OR DELAY OR FAILURE TO PERFORM ARISES IN CONNECTION WITH THE TERMINATION OR SUSPENSION OF DISH NETWORK'S ACCESS TO ALL OR ANY PORTION OF SERVICES, THE RELOCATION OF ALL OR ANY PORTION OF THE SERVICES TO DIFFERENT SATELLITE(S), A CHANGE IN THE FEATURES AVAILABLE WITH YOUR EQUIPMENT, ANY SOFTWARE OR OTHER DOWNLOADS INITIATED BY US OR ANY ACTS OF GOD, FIRES, EARTHQUAKES, FLOODS, POWER OR TECHNICAL FAILURE, SATELLITE OR UPLINK FAILURE, ACTS OF ANY GOVERNMENTAL BODY OR ANY OTHER CAUSE BEYOND OUR CONTROL.

B. NEITHER WE NOR OUR THIRD PARTY BILLING AGENTS NOR ANY OF OUR OR THEIR AFFILIATES WILL BE LIABLE FOR ANY DAMAGE RESULTING FROM LOSS OF RECORDED MATERIAL OR THE PREVENTION OF RECORDING, INCLUDING WITHOUT LIMITATION ANY LOSS OF PREVENTION OF RECORDING DUE TO ANY FAULT, FAILURE, DEFICIENCY OR DEFECT IN SERVICES OR EQUIPMENT.

C. EXCEPT AS EXPRESSLY PROVIDED TO THE CONTRARY BY APPLICABLE STATE LAW, NEITHER WE NOR OUR THIRD PARTY BILLING AGENTS NOR ANY OF OUR OR THEIR AFFILIATES MAKE ANY WARRANTY, EITHER EXPRESSED OR IMPLIED, REGARDING YOUR DISH NETWORK EQUIPMENT OR ANY OTHER EQUIPMENT OR ANY SERVICES FURNISHED TO YOU. ALL SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY DISCLAIMED AND EXCLUDED.

D. IN NO EVENT SHALL WE, OUR THIRD PARTY BILLING AGENTS, OR ANY OF OUR OR THEIR AFFILIATES HAVE ANY LIABILITY FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR RELATING TO DISH NETWORK EQUIPMENT OR ANY OTHER EQUIPMENT OR RESULTING FROM OUR FURNISHING OR FAILURE TO FURNISH ANY SERVICES OR EQUIPMENT TO YOU, OR FROM ANY FAULT, FAILURE, DEFICIENCY OR DEFECT IN SERVICES OR EQUIPMENT FURNISHED TO YOU.

E. IT IS YOUR RESPONSIBILITY TO IMPOSE VIEWING RESTRICTIONS ON YOURSELF, MEMBERS OF YOUR FAMILY AND HOUSEHOLD, AND GUESTS, AS YOU DEEM APPROPRIATE. WE, OUR THIRD PARTY BILLING AGENTS, AND OUR AND THEIR AFFILIATES SHALL HAVE NO LIABILITY TO ANYONE DUE TO, OR BASED UPON, THE CONTENT OF ANY OF THE SERVICES FURNISHED TO YOU.

8. WARNING AGAINST PIRACY AND INFRINGEMENT

A. It is a violation of various U.S. federal and state laws to receive any Services, or any portion of such Services, without paying for them. The penalties for violating such laws can include imprisonment and civil damage awards of up to \$110,000 per violation.

B. Title 47, Section 605(e)(4), United States Code (U.S.C.) makes it a federal crime to modify Equipment to receive encrypted (scrambled) television programming without payment of required subscriptions. Conviction can result in a fine of up to \$500,000 and imprisonment for five years, or both. Any person who procures Equipment that has been so modified is an accessory to that offense and may be punishable in the same manner. Investigative authority for violations lies with the Federal Bureau of Investigation. Equipment may incorporate copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of such copyright protection technology must be authorized by Macrovision, and is intended for home and other limited pay-per-view uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

9. GENERAL

A. Physical Address/Change of Address. When setting up your DISH Network account, you agree to provide us with the physical street address where your Equipment will be located and your Services will be provided. A post office box does not constitute a physical address and is not sufficient to meet this requirement. You agree to give us prompt notice of your change of name, mailing address, physical address where your Equipment is located, and telephone number. You may do this by notifying our Customer Service Center by telephone or in writing at the phone number or mailing or e-mail address set forth in the first paragraph of this Agreement.

B. Notice. Any notice required or permitted to be given by us under this Agreement may be provided via the mail, on your billing statement, as a bill insert, via broadcast on a television channel, through publication on the website set forth in the first paragraph of this Agreement, by telephone or by any other reasonable means. If we send you notice by mail, on your billing statement or as a bill insert, it will be considered given when deposited in the U.S. Mail, addressed to you at your then-current billing address in our records. If we send you notice via broadcast on a television channel or through publication on the website set forth in the first paragraph of this Agreement, it will be considered given when first broadcast or published. If we send you notice by telephone, it will be considered given when personally delivered to you or when left as a message at your then-current phone number in our records. Unless otherwise specified in this Agreement, any notice required or permitted to be given by you under this Agreement shall be in writing and shall be sent by first class mail addressed to us at the mailing address set forth in the first paragraph of this Agreement, and shall be deemed given when received by us at such mailing address.

C. Credit Checks. You authorize DISH Network to investigate your financial responsibility and creditworthiness, including without limitation acquiring credit reports and histories, and to report any payment defaults to credit reporting agencies. Under the Fair Credit Reporting Act, you have the right to notify DISH Network if you believe we have reported inaccurate information about your account to any consumer reporting agency. Please include the specific item of dispute and why you believe the information reported is in error in any such notice.

D. Personal Information. If you have an on-line account with us, you are fully responsible for maintaining the confidentiality of your password and account username and for all activities that occur under your password and/or account username. You agree to: (i) keep your account username and password confidential and not share them with anyone else, and (ii) immediately notify us of any unauthorized use of your password and/or account username or other breach of security.

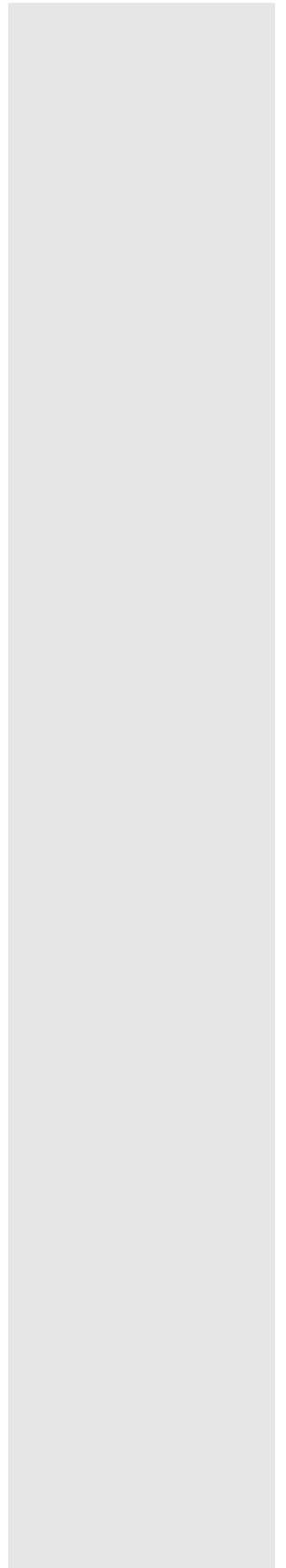
E. Applicable Law. This Agreement, including without limitation all matters relating to its validity, construction, performance and enforcement, and any claim, complaint or dispute arising out of or related to this Agreement or Services, shall be governed by the laws and regulations of the State of Colorado without giving effect to its conflict of law provisions. These terms and conditions are subject to amendment, modification or termination if required by such laws or regulations. If any provision in this Agreement is declared to be illegal or in conflict with any law or regulation, that provision shall be modified to the minimum extent necessary to make such provision legal and no longer in conflict with such law or regulation, without affecting the validity of any other provisions.

F. Third-Party Billing Agents. We may enter into relationships with third parties to provide billing and other services on our behalf, in which case the terms and conditions of this Agreement shall apply to such third parties as applicable under the circumstances. Additional terms and conditions imposed by our third-party billing agents, including without limitation, local telephone companies, may apply. For example (and without limitation), late fees imposed by our third-party billing agents may be administered according to our third-party billing agent's billing procedures and applicable state tariffs and regulations; our third-party billing agents may require you to pay all past due charges for Services, a restart Fee, and/or a prepayment before we reconnect your Services; other services provided by our third-party billing agents, including without limitation, local telephone service, may need to be restored before DISH Network Services can be restored, and a restoral fee and deposit may be required to restore third-party billing agent services. Partial payments on third-party billing agent bills may be applied to the balance due for other services billed on your third-party billing agent bill, including without limitation, local telephone service, according to the third-party billing agent's billing procedures and applicable state statutes and regulations. Contact your third-party billing agent for details. Failure to pay all or any part of your third-party billing agent bill may result in disconnection of Services.

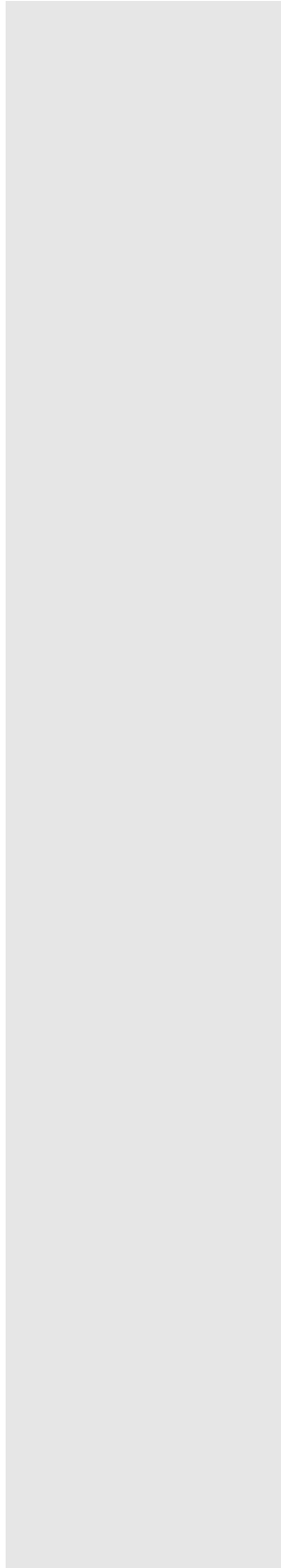
G. Remedies Cumulative. It is agreed that the rights and remedies provided under the terms and conditions of this Agreement to DISH Network in case of default or breach by you of this Agreement are cumulative and without prejudice to any other rights and remedies that DISH Network may have by reason of such default or breach by you at law, in equity, under contract or otherwise (all of which are expressly reserved).

H. Other. No salesperson, installer, customer service representative, authorized retailer, or other similarly situated individual is authorized to change the terms and conditions of this Agreement. DISH Network may, however, change the terms and conditions of this Agreement at any time and from time to time in its sole discretion and will notify you if that occurs. The terms and conditions of this Agreement that either are expressly stated to survive or by their nature would logically be expected to survive its expiration or termination shall continue thereafter until fully performed. This Agreement is in addition to any other written agreement(s), if any, between you and DISH Network, including without limitation any installation agreement or customer agreement(s), if any, applicable to the promotion(s) pursuant to which you are receiving Services and/or Equipment, and except as provided to the contrary herein all such written agreements shall remain in full force and effect. Except as expressly set forth in this Agreement to the contrary, any and all prior DISH Network Residential Customer Agreements are hereby replaced and superseded in their entirety by this Agreement, and such prior DISH Network Residential Customer Agreements shall be of no further force or effect whatsoever. In the event of any conflict or inconsistency between the terms and conditions of this Agreement and any customer agreement(s) applicable to the promotion(s) pursuant to which you are receiving Services and/or Equipment, the terms and conditions of such customer agreement(s) shall be controlling. In the event of any ambiguity between the terms and conditions of this Agreement and any customer agreement(s) applicable to the promotion(s) pursuant to which you are receiving Services and/or Equipment, DISH Network shall have the sole and exclusive authority to interpret and/or make a final determination in its sole discretion concerning any issue arising from such ambiguity.

Notes



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Notes

Write the following information in the spaces below. You may need to provide this info if you call the Customer Service Center. To get the Conditional Access Numbers, open the **Important System Information** menu (see *Ordering Your Programming* on page 6).

Purchase Location Name:	
Purchase Location Telephone Number:	
Receiver Serial Number:	
Receiver Conditional Access (CA) Number	
Smart Card Conditional Access (CA) Number:	
FCC Ringer Equivalence Number (REN):	If the receiver's REG. ID is 010, the REN is 0.1B. If the receiver's REG. ID is 013, the REN is 0.3B (for more information on REN numbers, see page 116).

Codes Programmed into the Remote Control	
Remote Address (SAT Mode)	
Television Code (TV Mode)	
VCR Code (VCR Mode)	
Auxiliary Code (AUX Mode)	